

```

1 CGGTGCTGCC GGGCTCAGCC CCGTCTCCTC CTCCTGCTCC CTCGGCCGGG
51 CGCGGGGTGAC TGIGCACCGA CGTGGGGCGG GGCTGCACCG CCGCTGTCCG
101 CGCGCCGCCA GCATGGCCAC CACCGCCACC TGACCCCGTT TCACCGACGA
151 CTACCAAGCTC TTGAGGAGC TTGGCAAGGG TGCTTTCTCT GTGGTCCGCA
201 GGTGTGTGAA GAAAACCTCC ACGCAGGAGT ACGCAGCAA AATCATCAAT
251 ACCAAGAAAT TGTCTGCCCG GGATCACAGG AAACCTAGAAC GTGAGGCTCG
301 GATAATGTGA CTCTGAAAC ATCCAAACAT CGTGGCCCTC CATGACAGTA
351 TTTCTGAAGA AGGGTTTCAC TACCTCGTGT TTGACCTTGT TACCGGCGGG
401 GAGCTGTTTG AAGACATTGT GGCCAGAGAG TACTACAGTG AAGCAGATGC
451 CAGCCACTGT ATACATCAGA TTCTGGAGAG TGTTAACCAC ATCCACCAGC
501 ATGACATGCT CCACAGGAC CTGAAGCCTG AGAACCTGCT GCTGGGAGT
551 AAATGCAAGG GTCGCCCGT CAAGCTGGCT GATTTTGGCC TAGCCATCGA
601 AGTACAGGGA GAGCAGCAGG CTGGGTTTGG TTTTGTCTGC ACCCCAGGTT
651 ACTTGTCCCG TGAGGCTCTG AGGAAAGATC CCTATGGAAA ACCGTGGGAT
701 ATCTGGGCGT GCGGGTTCAT CCTGTATATC CTCCTGGTGG GCTATCTCC
751 CTCTCTGGAT GAGGATCAGC ACAAGCTGTA TCAGCAGATC AAGGCTGGAG
801 CCTATGATTT CCCATCACA GAATGGGACA CGGTAACTCC TGAAGCCAAG
851 AACITGATCA ACCAGATGCT GACCATAAAC CCAGCAAGC GCATCACGGC
901 TGACCAAGCT CTCAGCAACC CGTGGGTCTG TCACGATCC ACGGTGGCAT
951 CCATGATGA TGTTCAGGAG ACTGTGAGT GTTTGGSCAA GTTCAATGCC
1001 CGGAGAAAC TGAAGGGTGC CATCTCAGC ACCATGCTTG TCTCCAGGAA
1051 CTCTCTCAGT GGCAGGCAGA GCTCCGCCCC CGCTCGCTT GCGCGAGCG
1101 CGCGGGCGCT GCGCGGCAA GCTGCCAAA GCTTATGAA CAAGAAGTGG
1151 GATGGCGGTG TCAAGAAAAG GAAGTCAGT TCAGCGTGC ACCTANTGGA
1201 GCCACAAACC ACTGTGTGAC ACAACGCTAC AGATGGGATC AAGGGCTCCA
1251 CAGAGAGCTG CAACACCAAC ACAGAAGATG AGGACCTCAA AGCTGCCCGG
1301 CTCCGCACTG GGAATGGCAG CTCGGTGCCT GAAGGACGGA GCTCCCGGGA
1351 CAGAACAGCC CCTCTGCAG GCATGCAGCC CCAGCCTCTT CTCGTCTCT
1401 CAGCATGCG AAAACAGGAG ATCATTAGA TTACAGAACA GCTGATTGAA
1451 GGCATCAACA ATGGGGACTT TGAGGCTTAC ACGAAGATTT GTGATCCAGG
1501 CCTCACTTCC TTTGAGCCTG AGGCCCTTGG TAACTCTGTG GAGGGGATGG
1551 ATTTCATATA GTTTTACTTT GAGAATCTCC TGTCGAAGAA CAGCAAGCCT
1601 ATCCATACCA CCATCCTAAA CCCACAGTC CAGGTGATTG GGGAGGACCC
1651 AGCGTGCAAT GCTTACATCC GCTCACCCTA GTACATGAC GGGCAGGGTC
1701 GGCCTGCGAC CAGCCAGTCA GAAGAGACCC GGGTCTGGCA CCGTCCGGAT
1751 GGCAGTGGC TCAATGTCCA CTATCACTGC TCAGGGGCCC CTGCCGCCAC
1801 GCTGCAGTGA GCTCAGCCAC AGGGGCTTTA GGAGATTOCA GCGGAGGTC
1851 CAACCTTCGC AGCCAGTGGC TCTGGAGGGC CTGAGTGACA GCGCAGTCC
1901 TGTTTGTTTG AGGTTTAAAA CAATTCAATT AAAAAAGCGG CAGCAGCCAA
1951 TGCACGCCCC TGCAATGCAG CCTCCCGCCC GCGCTTGTG TCTGTCTCTG
2001 CTGTACCGAG GTGTTTTTTA CATTTAAGAA AAAAAAAAAA AAAAAAAAAA
2051 AAAAAAAAAA A (SEQ ID NO:1)

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FEATURES:

5'UTR: 1-112
Start Codon: 113
Stop Codon: 1808
3'UTR: 1811

Homologous proteins:

Top 10 BLAST Hits

	Score	E
CRA 88000001156376 /altid=gi 7434378 /def=pir JC5636 Ca2+/calm...	1083	0.0
CRA 18000004937293 /altid=gi 125289 /def=sp P11730 KCCG RAT CAL...	1066	0.0
CRA 18000005054755 /altid=gi 1657464 /def=gb AAC48714.1 (U7297...	1038	0.0
CRA 105000014644765 /altid=gi 10443740 /def=gb AAG17558.1 AF233...	994	0.0
CRA 105000014644764 /altid=gi 10443738 /def=gb AAG17557.1 AF233...	989	0.0
CRA 18000004903800 /altid=gi 422770 /def=pir A46619 Ca2+/calmo...	986	0.0
CRA 18000005152785 /altid=gi 3241847 /def=dbj BAA28869.1 (D149...	986	0.0
CRA 18000004937876 /altid=gi 631810 /def=pir S43845 Ca2+/calmo...	985	0.0
CRA 18000004937877 /altid=gi 560653 /def=gb AAB30671.1 (S71571...	984	0.0
CRA 105000014644762 /altid=gi 10443734 /def=gb AAG17555.1 AF233...	976	0.0

FIGURE 1A

BLAST dbEST Hits:

	Score	E
gi 12893350 /dataset=dbest /taxon=960...	1778	0.0
gi 12790010 /dataset=dbest /taxon=960...	1463	0.0
gi 10142161 /dataset=dbest /taxon=96...	1443	0.0
gi 10158540 /dataset=dbest /taxon=96...	1366	0.0
gi 12796371 /dataset=dbest /taxon=960...	1356	0.0
gi 12340179 /dataset=dbest /taxon=96...	1320	0.0
gi 9342125 /dataset=dbest /taxon=960...	1185	0.0
gi 12386814 /dataset=dbest /taxon=96...	1180	0.0
gi 12421686 /dataset=dbest /taxon=96...	1172	0.0
gi 12886387 /dataset=dbest /taxon=960...	1063	0.0

EXPRESSION INFORMATION FOR MODULATORY USE:

library source (from BLAST dbEST hits):

gi|12893350 Placenta
gi|12790010 breast
gi|10142161 Skin melanotic melanoma
gi|10158540 Ovary adenocarcinoma cell line
gi|12796371 breast
gi|12340179 Uterus leiomyosarcoma
gi|9342125 Lymph Burkitt's lymphoma
gi|12386814 Small Intestine duodenal adenocarcinoma
gi|12421686 Breast mammary adenocarcinoma
gi|12886387 placenta

Tissue Expression:

Human fetal whole brain

FIGURE 1B

1 MATTATCIRF TDDYQLFEEL GKGFVSVRR CVKKTSTQEQY AAKTINTKKL
51 SAROHQKLER EARICRLKH ENIVRLHDSI SEEGPHYLVF DLVIGGELFE
101 DIVAREYYSE ADASHCIHQI LESVNHQH DIVHRDLKPE NLLASKCKG
151 AAVKLADFGI AIEVQGEQQA WFGFAGITPGY LSPEVLRKDP YGKPVDIWAC
201 GVILYILLVG YPPFWDEDQH KLYQKIKAGA YDFPSPEWDT VTIPEAKNLIN
251 QMLTINPAKR ITADQALKHP WVCQRSTVAS MMHQETVEC LRKENARRKL
301 KGAILITMLV SRNFSVGRQS SAPASPAASA AGLAGQAAS LINKKSDGGV
351 KKRKSSSVH IMEPQITVVH NATDGIKGST ESNITTTETE DLKAAPLRIG
401 NGSSVPEGRS SRDRTAPSAG MQPQPSLCSS AMRKQEIIRI TEQLIEAINN
451 GDFEAYTKIC DPLITSFEPE ALGNLVEGMD FHKFYFENLL SKNSKPIHIT
501 ILNHVHVIG EDAACIAYIR LITQYIDGQGR PRISQSEETR VWHRRDGKWL
551 NVHYHCSGAP AAPLQ (SEQ ID NO:2)

FEATURES:

Functional domains and key regions:

[1] PDOC00001 PS00001 ASN_GLYCOSYLATION
N-glycosylation site

Number of matches: 4

- 1 313-316 NFSV
- 2 371-374 NATD
- 3 384-387 NITT
- 4 401-404 NGSS

[2] PDOC00004 PS00004 CAMP_PHOSPHO_SITE
cAMP- and cGMP-dependent protein kinase phosphorylation site

Number of matches: 5

- 1 33-36 KKTS
- 2 48-51 KKLS
- 3 259-262 KRIT
- 4 352-355 KRKS
- 5 353-356 RKSS

[3] PDOC00005 PS00005 PKC_PHOSPHO_SITE
Protein kinase C phosphorylation site

Number of matches: 3

- 1 47-49 TKK
- 2 51-53 SAR
- 3 410-412 SSR

[4] PDOC00006 PS00006 CK2_PHOSPHO_SITE
Casein kinase II phosphorylation site

Number of matches: 12

- 1 36-39 SIQE
- 2 51-54 SARD
- 3 79-82 SISE
- 4 94-97 TGGE
- 5 109-112 SEAD
- 6 385-388 TTTE
- 7 386-389 TIED
- 8 387-390 TEDE
- 9 404-407 SVPE
- 10 410-413 SSRD
- 11 465-468 TSFE
- 12 534-537 SQSE

[5] PDOC00008 PS00008 MYRISTYL
N-myristoylation site

FIGURE 2A

Number of matches: 4

- 1 302-307 GAILIT
- 2 375-380 GIKGST
- 3 378-383 GSTESC
- 4 400-405 GNGSSV

[6] PDOC00100 PS00107 PROTEIN_KINASE_ATP
Protein kinases ATP-binding region signature

20-43 LGKGAFSVWRRCKKISTIQEYAAK

[7] PDOC00100 PS00108 PROTEIN_KINASE_ST
Serine/Threonine protein kinases active-site signature

132-144 IVHRDLKPENLLL

[8] PDOC00364 PS00402 BPD_TRANSP_INN_MEMBR
Binding-protein-dependent transport systems inner membrane comp. sign

405-433 VPEGRSSRDRTAPSAGMPQPSLCSSAMR

Membrane spanning structure and domains:

Helix	Begin	End	Score	Certainty
1	195	215	1.665	Certain
2	319	339	0.818	Putative

FIGURE 2B

BLAST Alignment to Top Hit:

```
>CRA|88000001156376 /altid-gi|7434378 /def-pir||JCS636
  Ca2+/calmodulin-dependent protein kinase (EC 2.7.1.123)
  II gamma-E - human /org-human /taxon=9606 /dataset=nraa
  /length=556
  Length = 556

Score = 1083 bits (2771), Expect = 0.0
Identities = 534/577 (92%), Positives = 539/577 (92%), Gaps = 12/577 (2%)
Frame = +2

Query: 113 MATTATCIRFTDDYQLFEELGKGAFSVVRRVCVKKTSTQEVAAKIINTKKLSARDHQKLER 292
           MATTATCIRFTDDYQLFEELGKGAFSVVRRVCVKKTSTQEVAAKIINTKKLSARDHQKLER
Sbjct: 1    MATTATCIRFTDDYQLFEELGKGAFSVVRRVCVKKTSTQEVAAKIINTKKLSARDHQKLER 60

Query: 293 EARICRLIKHPNIVRLHDSISEEGFHYLVFDLVTGGELFEDIVAREYYSEADASHCTHQI 472
           EARICRLIKHPNIVRLHDSISEEGFHYLVFDLVTGGELFEDIVAREYYSEADASHCTHQI
Sbjct: 61   EARICRLIKHPNIVRLHDSISEEGFHYLVFDLVTGGELFEDIVAREYYSEADASHCTHQI 120

Query: 473 LESVNHIIHQHDIVHRDLKPENLLASKCKGAAVKLADFGLAIEVQGEQQAWFGFAGTIPGY 652
           LESVNHIIHQHDIVHRDLKPENLLASKCKGAAVKLADFGLAIEVQGEQQAWFGFAGTIPGY
Sbjct: 121  LESVNHIIHQHDIVHRDLKPENLLASKCKGAAVKLADFGLAIEVQGEQQAWFGFAGTIPGY 180

Query: 653 LSPEVLRKDPYCKPVDIWAQGVILYILLVGYPFPWDEDQHKLYQQIKAGAYDFPSPENDT 832
           LSPEVLRKDPYCKPVDIWAQGVILYILLVGYPFPWDEDQHKLYQQIKAGAYDFPSPENDT
Sbjct: 181  LSPEVLRKDPYCKPVDIWAQGVILYILLVGYPFPWDEDQHKLYQQIKAGAYDFPSPENDT 240

Query: 833 VITEAKNLINQMLTINPAKRITADQALKHPWVQQRSTVASMMHROETVECLRKFNARRKL 1012
           VITEAKNLINQMLTINPAKRITADQALKHPWVQQRSTVASMMHROETVECLRKFNARRKL
Sbjct: 241  VITEAKNLINQMLTINPAKRITADQALKHPWVQQRSTVASMMHROETVECLRKFNARRKL 300

Query: 1013 KGAILTIMLVSRNFSVGRSSAPASPAASAAGLAGQAAKSLINKKSDGGVKRKSSSSVH 1192
           KGAILTIMLVSRNFS                                AAKSLINKKSDGGVK + ++ +
Sbjct: 301  KGAILTIMLVSRNFS-----AAKSLINKKSDGGVKPQSNKNKSL 339

Query: 1193 L-----MEPQITVVHNAIDGKIGSTESQNTTTEDEDLKAAPLRITGNGSSVPEG 1336
           +                      MEPQITVVHNAIDGKIGSTESQNTTTEDEDLKAAPLRITGNGSSVPEG
Sbjct: 340  VSPAQEPAPLQTAMEPQITVVHNAIDGKIGSTESQNTTTEDEDLKAAPLRITGNGSSVPEG 399

Query: 1337 RSSRDRTAPSAGMQPQPSLSSAMRKQEI IKITEQLIEATNNGDFEAYTKICDPGLTSFE 1516
           RSSRDRTAPSAGMQPQPSLSSAMRKQEI IKITEQLIEATNNGDFEAYTKICDPGLTSFE
Sbjct: 400  RSSRDRTAPSAGMQPQPSLSSAMRKQEI IKITEQLIEATNNGDFEAYTKICDPGLTSFE 459

Query: 1517 PEALGNLVEGMDFHKIFYFENLLSKNSKPIHTTILNPHVHVIGEDAACTAYIRLTQYIDQ 1696
           PEALGNLVEGMDFHKIFYFENLLSKNSKPIHTTILNPHVHVIGEDAACTAYIRLTQYIDQ
Sbjct: 460  PEALGNLVEGMDFHKIFYFENLLSKNSKPIHTTILNPHVHVIGEDAACTAYIRLTQYIDQ 519

Query: 1697 GRPRTSQSEETRWWHRRDGKWLNVHYHCSGAPAAPLQ 1807
           GRPRTSQSEETRWWHRRDGKWLNVHYHCSGAPAAPLQ
Sbjct: 520  GRPRTSQSEETRWWHRRDGKWLNVHYHCSGAPAAPLQ 556 (SEQ ID NO:4)
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FIGURE 2C

Hmmer search results (Pfam):

Model	Description	Score	E-value	N
PF00069	Eukaryotic protein kinase domain	309.5	4.1e-89	1
CE00022	CE00022 MAGUK_subfamily_d	295.5	3.9e-87	1
CE00359	E00359 bone morphogenetic protein_receptor	14.8	0.0017	1
PF00534	Glycosyl transferases group 1	3.3	9.1	1
CE00031	CE00031 VEGFR	0.3	3.2	1
CE00292	CE00292 PTK_membrane_span	-59.7	1.5e-05	1
CE00287	CE00287 PTK_Eph_orphan_receptor	-63.5	0.00035	1
CE00291	CE00291 PTK_fgf_receptor	-90.9	0.0016	1
CE00286	E00286 PTK_EGF_receptor	-131.8	0.0056	1
CE00290	CE00290 PTK_Trk_family	-154.9	0.00012	1
CE00016	CE00016 GSK_glycogen_synthase_kinase	-180.4	1.2e-06	1

Parsed for domains:

Model	Domain	seq-f	seq-t	hmm-f	hmm-t	score	E-value
PF00534	1/1	31	65 ..	161	195 .]	3.3	9.1
CE00031	1/1	133	161 ..	1068	1093 ..	0.3	3.2
CE00359	1/1	132	186 ..	272	327 ..	14.8	0.0017
CE00286	1/1	14	252 ..	1	263 []	-131.8	0.0056
CE00290	1/1	15	253 ...	1	282 []	-154.9	0.00012
CE00291	1/1	14	267 ..	1	285 []	-90.9	0.0016
CE00292	1/1	14	267 ..	1	288 []	-59.7	1.5e-05
CE00287	1/1	14	270 ..	1	260 []	-63.5	0.00035
PF00069	1/1	14	272 ..	1	278 []	309.5	4.1e-89
CE00022	1/1	10	305 ..	13	316 ..	295.5	3.9e-87
CE00016	1/1	1	345 [.	1	433 []	-180.4	1.2e-06

FIGURE 2D

1 TTGCCCCGCG CCTGGTCTCC CTGATCAACC CGCGCCTGAA GGGTTTCTTT
51 CTAATAATGG CCTGGTGGCT TGCGCAAGTC TAGACTGTCA GCTCCAGAG
101 GGAAGGCGGC TGGCAGCTGG CTCTGGCGAG GCTGGGGGCG CTTCCCGGGC
151 GTGCAGGCTG GCACAGGCTC CTTGACCTTG GCTCTCTCCC CACGTGCTAG
201 GAGCCCGGTT GGGGGCTCGG GACCCGCGTG TAGGACCCGT CCAGAGAGGT
251 CAGTGGTCCA GACTCTACA CTCTTAACAC ATGCAACCTC GCATGCAGT
301 TCCCGAGGCC GCGCGGGGTC CGCCCGGGGA CAAGCCATA AGTCGGGAC
351 CTTCAGNNN NNNNNNNN NNNNNNNN NNNNNNNN NNNNNNNN
401 NNNNNNNN NNNNNNNN NNNNNNNN NNNNNNNN NNNNNNNN
451 NNNNNNNN NNNNNNNN NNNNNNNN NNNNNNNN NNNNNNNN
501 NNNNNNNN NNNNNNNN NNNNNNNN NNNNNNNN NNNNNNNN
551 NNNNNNNN NNNNNNNN NNNNNNNN NNNNNNNN NNNNNNNN
601 NNNNNNNN NNNNNNNN NNNNNNNN NNNNNNNN NNNNNNNN
651 NNNNNNNN NNNNNNNN NNNNNNNN NNNNNNNN NNNNNNNN
701 NNNNNNNN NNNNNNNN NNNNNNNN NNNNNNNN NNNNNNNN
751 NNNNNNNN NNNNNNNN NNNNNNNN NNNNNNNN NNNNNNNN
801 NNNNNNNN NNNNNNNN NNNNNNNN NNNNNNNN NNNNNNNN
851 NNNNNNNN NNNNNNNN NNNNNNNN NNNNNNNN NNNNNNNN
901 NNNNNNNN NNNNNNNN NNNNNNNN NNNNNNNN NNNNNNNN
951 TCACATTA ATTTCAAAT GTTTCTCCG GTTGTCACT TGTGGTTTAA
1001 CTATGTCAA TGGTCTCAC CAAGCAATTT TGCAAAATAG TTAACTTATT
1051 CTCTTTTCT TACATGACTT CTTGACTTTG AGCATAGTT AGGAAAGGT
1101 TGCTCCTCT CACATAGAG TAAATTTAT CCACATTTTC ATCTAGGATT
1151 AGTGTCTAT TTTTATTAT TATGAATAT TCTTCATTT GGGGTTTGT
1201 CATGTATAT CCATGAACAA TGGAGCGGG TGCGAGCATTT TAGCATCAGC
1251 TATCCCTTC CCATCCGCAA TGAGCTGGCC GCTGCAGCAG CCCCAGGCC
1301 CCACCCCTAC CCGCGCGGC GAGCCCGGC ACTGCAGCC CCGCCCGGC
1351 CGCCCCCTCA GAGTCTCCA GAGCTCAGG TCGAGCTCC GGTGTGACGG
1401 GAGGTCAAG GAAATAGCA TGGGAAGGG AGTCTTTGAT GTCTGACTGT
1451 GTCTCTCTT CCTTGTCTGT CAGTTCAGCC GGGATGCAGT GAGATGAAAC
1501 CGGCTGTGG GGGGTTTGG CCTCACTTTG CCCCATGGTT GAGGAGATT
1551 TCTCTTTCA GGGATGATAC CCTCTTTTAA ATCTTTCTTT CCCCAGCTT
1601 CAGCTGTTC TGCTGAGAG AGGGCAGGT CTCTCTGCTC CCTTCTGCC
1651 TGGTCTCTT GCGCGGACC GCAGGGCTGT CTGAGATGCA GCAGGTGTGT
1701 GTTTTCAGCA TGCCCCACC GCTCCGATG TGCAAGCTGA GGTGGAGGCT
1751 GTTGCCTTC CAGGGACTG GATGAGGGG TGGGAGCGG GCAGCCACC
1801 CACATCTGT CAGTGTCTG CGGTGGCGC GTCTTTTTC CTCTGTGTG
1851 ATGGTGGTG TCACAGCGC GGTGTGTGT CATGTAGTG AGTGTGCTA
1901 GAGGTCTGT GGTGGGAGCA TCATGTGCC CAGACTTGA GTGTGTCTGT
1951 GTCTCTCTG CCTGTCTGT GTCCAGTTC TTTTCCCTT CTCTCTCAG
2001 GGGTGTCTT CTGTGGTTC GCAGGTGTGT GAAGAAACC TCACCGCAGG
2051 AGTAAGCAGC AAAAATCAT AATACCAAG AATGTCTCT CCGGGGTGAG
2101 TGTTCCTGT CTGACCTCT TCTGAGGGT GCTCCAGGG GCATGGTTT
2151 CTTTGTAGGA AGCCCCAGGA ATTGGGGGT GTGGTTTAA GCCTTGGAG
2201 AGGAGTTGA ATTTCAACT GGTGTGACT TGTGTAGGC TGAAGCCAG
2251 AAAGGAGTG CATGGGGAC TGGAGCGCC CAGGTACAA AGAATGAAG
2301 AAGAGATGA AGTAGCTGA GTGGCCCA AAGGCTCAG GAGTTCTGT
2351 CTTCAGGAG GTGAGGATA TGGGGTAGT GGTGTGACA GAATGGGAG
2401 CTCTTAATT GGGCATTTG GAGCTCTCC CTTTGGGGCA GTGTGGCTA
2451 CTGAGGCTT TTCTGTGTC CTCTCTACC ACCGGCTGAG TTAGGATGA
2501 AATGCAGTAA GTGAGCAGT CTGACAAAG CAGCTCCCC TGCCACCAG
2551 GCGGCAGAC AGACTCCAA GCGAAGGAA TCTGTAAACA TCAGGGGAG
2601 CTGCTACTGG CAGGGCTTC TCAGGAACA ATTCTGCAG ATGAACTGA
2651 TTGCTTTTGT GATCAAAAT CAAAGTTGT GGTGCAGAG CAGATGTAGT
2701 CTGTCTGGG TGGAGGGTGA TGCTCATGG TCTAGAAAT CCAAGGCC
2751 GGTGTGGGA GGAACGTAC TGCTCCGAA CTGCACTGC TCGAGTCTG
2801 AGGAGCATAA AGGCCAAGC CTTGGGGCT CACTTGCGAG ATCTCCCAA
2851 GTACTGAGG CTGGAGGGT CAGGGCTGT CTTTCAACC TTGAACCTAC
2901 ACTCTCTGA CTCTCTATT GGTACTTGC AAACCTACT CATCTGATG
2951 GTGTAGACC AGCAATGTG GAAGTGTCT GCGAACAGT CTGGTGAAT
3001 CAGAGTCAG ATCTCGAGG GCTGAGGGT GCAGCTGGG GACAAAGGT

FIGURE 3A

3051 GIGAACTICA GAGAAAGGAA TTAGGGCTGG GCAGTAGGAT GOCATAAATA
3101 TATTGTGAGC CAGGACACAT GOCCTGGGGA AGACATGGGC TTGGGCCAAT
3151 AATGACACGG GTTCTCTCTG GATAAGAGAC ATAATAGATG TCCCAAATGC
3201 TTAGAGAAGC TCTACAATTC CACGGGCTTC TGTGTGTTTG GCAGTTGTTC
3251 TGGACCTGTG TTAGCAGGGC CGTGTCCTCT CCTGACTGG GACTCTCTCT
3301 TCCATCCTCT TGGTAGGGCA CTAATGTCTG ACTCCCATCC AGCTCCATCT
3351 CTGTCTGTTC GGTACATTG CCTATAAGT TGGACTTGTT TGTTTTCTTT
3401 CTCCTGGGT ACCCTGAGTC TGAGGATGGT TGCCATAGAG ATATGTGGGC
3451 AGTCAGATAC CCTGGAGTGG GGGTGGGGGG GACAACAGGG GCTGGGCTCT
3501 CTGGCAGACA TCTCTGGGC AAGGATGGAA GGTGCAGGCA GGAACAATGG
3551 CTTGAGGCTG GATACCTCTC TTGCCCACAC AGCAGAGGCC TGGTGATCA
3601 GAAACAGGGC TGGCATCTGG TGCTCCAGT TGATGATGCA ATGCTTTGCT
3651 CTCCTCATCT CACCAGTTC CTCGACCCA TGGGTAGAG AAGGAGAT
3701 GGTGGGAGC CGAATCTGG GATGTGAGGA TAGGTGATGT GGTGACTTCC
3751 TGCAGCTGCC TGACTGGGGC TTTCATTTCC TACTCCCTCC CTACCTGCGT
3801 AAATTTCCAT GACCTGTGTG ATAGCTCCC TTTCCTTCC TCACCTCCTT
3851 TTAACTTGT CCACTCTTTC CCAATGGATA TCTTTCCCTG GCAAACCTGG
3901 ATGAGACTTG ATTCTCGTT GATTTTTTTT TTTTCCCTCC CAGAAGAGG
3951 ATTCTTGTGT AAAAGTATAT GCTTCAGACA GCAACTCCCC CTCCTCCAG
4001 ATGATATGTC CAAGACTGGG CTCGTGTGTG TGGCTCATG TGCCAGGTG
4051 ACTTTGGGAC AGAGGCACAG ATGATAGGCA CAGATGCCAG CCAGAGGGGT
4101 CAGAATGTGT AAGTCCAGC CAGTACTGTG TGGAGGTGG AAAGTGGAAA
4151 GGGCTGTCTT TGAGATGGA GGAACAAGG TGGGGCTGGA CTATAGGTGT
4201 GGGCATGGGA GATGTGAAT CCTGGAGACA TCTGGGCCAG GGTAGCCATG
4251 GGTGGTTTC CATGGGTTA GGGAGTGGG GCAATGGCTT CCTGCAGAC
4301 TCTCAGTTTA CACTATATAT TTTATAAAGG TGCCGCCACT GGAGCTGGGT
4351 TTCCTCATC GCCTCTGCC TAGGTCTCG CAGGTGTGG ATTTCTGTGT
4401 CTGGGAATGT GTGGGCCCC CAGGGTCAT CTGTGAAGGT CTGAAGGGGC
4451 TTGCTGTGTT CACTGGTCT TCCCTGCTCC TGTCTTCTTT GTTTGTGATT
4501 CTCCTGGCTA CAACTGAAA AGATAAAAAG AGGGTATAGA GCTGTTCTCT
4551 CTTCGCATCC CTGGTGAGGT GGTAGGAGT CAGGAGAGG GATCACCCTG
4601 CTTCTCTGGG GGGTCCAATC GACACAGGAA GCTCTCTTTT GGGCTGTGT
4651 GTCCTGTAC TGTTGGCTCA GAGGCCACA TTGGGGCTTA GGTGCAAGG
4701 TGGGAGTTC ATGCCGATAT GCGTTGAGCA CTGTCTTGT CTGGGGGCTT
4751 GTCTACATAA AGTCACGAA AGTCACATAA GGTCACTCCG TTTGCTTCAG
4801 AACGGTATA GAGTGGAGC TGGGCTCTTA AGGGAGGCCA TGGTTCCAG
4851 CTTAGCTCCA CTAGGCCGAA GGAGGCATTT AAAATAGGCT TGGATGCAGG
4901 AGCTAGTGGG CCAGGTGATG GCAATGATAA GTCTTATTTT TAAGATTIAA
4951 GAGCACCCC CTCAGGAGC CTGAGGCCCT ATGCTTTTTT TTATTTTIAA
5001 ATCTTCATAT TCCCTCTTA TCTTTATTA TATGCATACA GATTTTCAAC
5051 TGTGGAGCA TAACATTTTA TATCCCTCTC TCTTTGCTTA TATCCAAAGC
5101 ATTTCCCCCA TATTACTACA GTTGAAGGGC AAATGGTCTT TCTTCTACG
5151 TGTATTAGGA TTTATCCCTA AAACAATCAG CATCACAAGA AACTTCTGTA
5201 TATGATCCAT TTATCTGGAT TCCAGTTGCT TTTACCAAGA TAGATACCTG
5251 GGTAATGCC TTGGCTTAC TAAGAGATGC TACCGGAAC AGTGTTTTGA
5301 AATCTGTAT AATACITTA CATATTIAT TAATCTGTAC ATTCCGTGTG
5351 AAGAAATTTT TTTTGAAGCT AAATGTAGC AAAAGCTTTC CTCCTTGTA
5401 GGACCTGAGA GGTGAGGGA GGTCTCTTAT GTGTCTTAT ACTTCTGCAT
5451 GGGCAGGCC TAGCGAAGTG CCTGACGTAT GCCAGCCACA TACACATTAA
5501 ATGAATGGGT CAAGAGGACT ATGTAACCAA TCATGGTTGC CTTTGGCTT
5551 TGGCTCTAG GAACTCAGA GTCAAGTTC CAGAGGCCCT GTACCTGTCT
5601 ACAGACTTGG GTCTCTCTT TCTGATCCAG GGAGCCAAGC TGCAGACTG
5651 ATACGGCTGC TGAAGAGAG GACAGATGAG GATAAAGACC TGTCTTGGG
5701 GCATAAGGCA GAGTGGGAGA TGTAGGCAGA CATTTAGCTG ATGATTCTCT
5751 CTCTCTGTCT ACTAAATGGC ACTATAGGCG CACTGTGGG ATCTCTTCCA
5801 GGTAGTCAAT TTCAATTTTA GTGTGGTAA GGATCAOCT GAGTACTAGT
5851 TTAATAAATA CAGACTTCTG GGTCTTAGCC ACAGAGATTC TGTCTTAGGA
5901 GGTCTAGGCT GGAGCTGCAG AATCTGCATT TTTAACACAT GCTCCAGTGA
5951 ATTCTATGCA GGTGAGGCAT GAGCCACTCT TTAAGAGATG CCACTAATAA
6001 TCTGCAACAA CAGTGTCTCT TGCCATGCC TCTGGAATTC AACAGACACA
6051 CCTTGGGCCA TCTCTTCCA GATTGTGTGT CTGCCACTAT GTGGCACTCT

FIGURE 3B

6101 GTGCACATGG GCTGTTCTGT GATTAGGGGC CTGTTCTGG GCGTGGGAT
6151 TGGGGTGTCT GTGTCAGG CTGGGCAAG CTGGGTGGCT GGGTTGTGG
6201 CATGTTGGCC ACCAGAAGG TAAAGGCTGT CCCTTCTGG GTCCAGCTGG
6251 CCGTGGGGAC TGAATGGGA TCCCTGGAT GGTGCGAGCT GAGAGTCCC
6301 GCGCCCTTAG TGTGGGCTG AGTAGCCCC ATGACATTG TGTCCCCTGT
6351 GGTATCTCCA AGTAGACTT TCTGTTAAG GATCTGGGTG AAGTAGGGGA
6401 AAGAGAAGGG AGGGGAAGC AGTAATGCAG GGAGTGGAG AAGGAAGAGA
6451 AATCACACA GCACTGGAAC ACAGGCTCG AGGAAGCATT TAAGGAGGCT
6501 GTGTGGGAAA CCATGCTTTC CTCTGAGGA TAAACAGGC CAATTCTGT
6551 AAACAGAGAA ATGGGCATCC TGCAATCAG TGATGGAGG CCCTACTTT
6601 CTCCTCTGAA GGGATGGAAG CCGACTGCAG GTCCCTCTGT GCAAAGGCTT
6651 CTGCCAGGG GCTTTTGTCA CGCGGTACG TTGAGCTGTG GCGCTTAGCA
6701 CACACAACAC TGGCCGTCC CCGTCCCTC CCACCTGTCT TCTAGAGTG
6751 ACTTGGGGT CTGATCATG GTGTGGGAT GGAGGTGGGA AGGTTGCCCT
6801 GTCTGTGAG GGAGGCCCC GCTTCTTCC TGCTGTCTC TCTGGTCCC
6851 TGTACCCATA CCGTGTGTC AAGCTGTGCT GAAACCTAG AGGTGAGTGG
6901 CTGACCCAT TCTCTGCTA GACTGGAGT AGGAAGGGG AGGCTGGGTG
6951 TGACCATTC TGCTCCATC TGTATGCTG CTGCTCTCTG AACAGCTTTG
7001 GCAGACCAAC AAGGCGCTGA TCCCATGGT GCGAAAAGG TGGTGACAGG
7051 AGGAGATGG CACTTTGCAC CTCCTGAATG CCCTCTCTGA GAGCCCCCTT
7101 GTCACTTACC CATGGCCAG CAGATCTGCC GCAGGACCG TGGGGAATC
7151 AAGCACAAA AGCTTTGTCT GGGGTCTTTT TTTTCTTTT TGGTTTGTG
7201 CTGAGGTGC CCATGACTT GCGAGGCTC AGACCCAGG TCCCTAGGCC
7251 GTGTGGGCTC CCGGCTTCC TTGGGCGCTT TCTTAAAC ACAGGTCTG
7301 GATACTTTGT TCTGTGATG AATCTTGGCA TATCACTCA CACTCTCCA
7351 TCTAGGCCC AAGCTCCAG CCGTGGGAG CAAATCCCTC CTGTGTGCTG
7401 GCTGAGGCG CATTCGGTC TGTACCCAC TCTCTGGCT GTGGGGTGG
7451 GAGATTCCA GCGCTCTC CCGAACACA TCTCCGCTC CTGGGCGCTA
7501 TCAGCAGAG CCGCAGCTC CCATCTGCT CCGCTTTTC TCTCCCTTT
7551 CTTTCCCTC CCGCTGCTT GCTGCTGCC TGGAGGAGC TATTTTAGG
7601 GCGTGTCTC TGGATGTTT TACTTGGGC TGGTTACAT GAAGGAATG
7651 TCACCAAAAC AGTGGGCAA GCGTGCAGC ACCGGAGCC CTGCGGGGG
7701 GCATGGAGAA CAGACGCTG ACGCTTTCT GCGCCCTGAG AGCAGCCAGA
7751 GTGCCCCAG GCAGAGCTT GCGTCTTGG GCGTGTCTG TGACCCCTG
7801 GGGATTTCT CTGTCAAAGC TGATGAGGG CCGTTTCTCT ATAGGGCAT
7851 TCTTGGAGC TCTGCTTCC CTGCTCTGA GATCCAGAG CCAAAGTGG
7901 GCTCAGTCT TTGTGTCAC AAGTTAAAC TGCTTGTG AGGGTTGAAG
7951 ATAAGGGGAG GATGCTGGT ACATGCACAG AGCCTTGGG GTTCAATGG
8001 GACATTTCA GCGCCGCTC CTCGTATCA CAGCCCCAG CTAGTACCA
8051 GGTGTACAT GTGTAGGGA TTAGAAACA TGGTCTGCT CTGTGTGTC
8101 GGTAGGACTT TCGTTTAAAT TGGAGACTT TTGCATCTT AGAGTGAAT
8151 TCAAGAGGA AGGATGTGG CATCACAGT TCAGGGTGA GTGGGTGGGA
8201 TGTGGCTTG GATTCACC TGGTCTGCT CCGAGGCCA GGGCTGTGA
8251 TAAGCAGCT GGAAGGTGG ATTATGACAT CAAATCCCTG CGATGTCTT
8301 GTTCTGTCT CTCAGAGTC CAAGGGGACC AGAGGGGCG CTCGTGTCT
8351 TGGGAAGAG ATGAAAGGA CTCAGGAGG CAGCAAGTA GCGGCGCTC
8401 CATGGAGGCC TGAATCAGT GGGGTGTGAG GAAGTTCTC ACATCCATG
8451 TTAGGGTAT AGGCACAGC CTGCAAAATA CCGTTTGA AGTTAAGAT
8501 GTCTTTGAG TTGGAACCT GAGAGTCTT CAGTCAGAT AGGAATGTG
8551 ATCCCTTCCC ACGTACAGAG GATTGTATG TTACGTGGCA GCAGGATCT
8601 ATTTGAAGCT AGTGTGGCA TTTGTGTTT TTTTGTAGGA AATGTCACT
8651 AAGTCAAGCA GCGCATCC TTAGAGGGC ATGAGAATC TGTGGCCAGC
8701 CCGCCCTGG CCGCTGACT GGCAGAGGA GGAAGGGCA TTGGAGTAGG
8751 CTTCTGTCT CAGGCCAGG GGGGAGGTG TTCAGGGGCA GCGTTGGTG
8801 ACCCTTGGC TGCAAGCTAT CAGCTCCCTA TCTGCTTCT CTTTCTGCT
8851 TCCCTTGGT CATCTGGTA CTTCTGTCT CCGTCTCTG GAAATCTGG
8901 CAGCTTGGC CAGTCTGA AGCACTTGG CAGAAGGGG GAGAGGTGG
8951 GTTCTTAGGA TCGTGTCT CAGGGGCTG GCTCTGGCT GGGCTCAGC
9001 CACTCTGCT TGGGAGGCT GCTGGGAAA GCGTGGAGCT GCTTCTGCT
9051 TCTGCTCTG TTGCCACTC TGCTAATGAT GGGGAAAAC TGCAAGGGC
9101 TGTGTGTGA GCTGGCTGA AGGCGGCG GGTGGGTCT CCGATGGCA

FIGURE 3C

9151 GTAGCACACA GGCAGGCAGG AAGTGGCCCT GTGCAAAGC GGAAGTGGC
9201 AGTTGTCAAA CAGGAAGGGG GGGCTGGGC TGTGGTAGG GCGGGATGA
9251 GCTTGGTAGA AAGGTGCGTG GAGGAGGGTC CACTTGGAA GGCTTGAGCC
9301 TCCTCCCTAGT GGTACTGGA AGGAGGGGTG TCTCAAGGGG AGACACCTTT
9351 GTAGCACTTT GAGATGCGGA GGCAGGGCCC TCCACTGTG GACCAAGCCC
9401 ATTACATGGC CTGCGCCCTTT TTGGGGTTGG AGATGCTGGG TCCAGCTGGG
9451 ATGCCCCTTG TTTTGGGAAA GATGCTCTAG AAACCTACTC TCCATCCTGG
9501 AAGCCCTCTG CTGCCACTGC TGCTGGGATG GAACCTCTGC TTTTGTGAG
9551 CCGTGGGCCA GCGCTGGATG TGACTACAGG ACAGGAAGTG TCAGGGGAAG
9601 AGACAGGAGA CAACAGCTGG AGAGGCTGGG TGGTGGCCGG GCAGTATGTG
9651 GTAGCAGGAA CCGGAGAGC GGGCAGGTA GAACTGCTC TGTTCATTGA
9701 GAGAGCTTGT TGGATGGCAG GGTGCCACGG CTGCGAGGAA GAGGAGGGA
9751 GCGACAGTG GCACCTTCTG CCGGCTTCCC CTCTCTCTGA GGAGCCCTG
9801 TTGCTGCCCA TCACCTGCAG ACTGTAGACA CAGGTGGGCC CCGCAAAAC
9851 AGGGAGGGAC ACTCCACCTC CAGGACTGCA ATGGAGGACC ATGTGGGGAG
9901 CCGAGAAGCC AGGCAGGAGG GCTTAGTTGC TGTGTGCGAG ACCCTGCATC
9951 TGCTGGGCT GAGGGGACAG TGGGTCCAT TCACAGTGTG TCTGTGATA
10001 GCTGTGCCA CAGGCCAGC CCAGGAGACC CTGTCAAGCT TCTACCTGG
10051 CCGTGGAAA GGAGCTATAT GGCAGACCTT ATGCAAACT CTGACCTGT
10101 ACCACTCAG TTAACCTCA GATCTGTCTG TCTCTATTTT AGAAGTGGG
10151 AACCTCTTG CCGGGTGGG TGGCTCAGC CTGTAAATCC AGCACTTTGG
10201 GAGCCGAGG CAGGAGGATC ATAAGGTGAG GAGATGAGA CCATCCTGGC
10251 TAACACAGTG AAACCCGTC TCTACTGAAA AATACAAAAA AATTAGCCGG
10301 GCATGGTAT GGGCGCCTGC AGTCCAGCT ACTCGGAGG CTGAGGCAGG
10351 AGAAGGGGT GAACCTGGGA GCGGAGCTT GCAGTGAGC GAGATCATGC
10401 CACTGCATC CAGCTGGGC AACAGAGTAA GACTCCATCT CAAAAAAG
10451 CAAAAAAGC AAACAAAAGC AGTGAGGAC CTCCTTCCCA AGATATGTG
10501 CCTGGCTCAC TGTCTCACT ACTTTGGGTC CTAATCAAT GTACCTCTC
10551 TACTGAGGCT TCTTGGACT GCGCTACTCA AATCTGACT CCGACTTTC
10601 TCTGCTTTT CTACGAGCA CTTCGGTGA CATCTAACGT GCTGTGAGT
10651 TTTCTTACTG TCCATCCCTC CCGATACAC AACCCACTAG AGTGTGAGT
10701 CCATGAGGC AGGGATTTT GTCTGTGTG TTGCGCAGT TCTTCTAGC
10751 ATCTGAATA CTGTCTGTA CATAGTAGGC CTGAGTAAT ATTCTTTTT
10801 TTTTTTTGAC TTGCTCTGTC ACCCAAGCT GGAGTGTAGT GGGCAATCT
10851 TGGCTCAGT CAGCCCTCAC CTCCTGGGTT CTAGTGAGCA CATTGGCTA
10901 AATTTTGTAT TTTTAGTGA GATGGGGTTT TGCCATGTG GCGAGGCTG
10951 TCTTGAACTC CTGACCTCAA GTGATCCACC CACCTTGGCC TCCAAAGTA
11001 CTGGACTGGG ATTAAGGGG TGAACCAAGG CGCCAGCCA CCAATAATAT
11051 TCTTGAAGG AATGAATGAA GCTGGGGTGG GTTAATAGC TTGCTGGATG
11101 TGGCAGTGT GGGCTCAATC CAGGCTGTG TGACTTCAA ACCGATGTGT
11151 TGTAAATTC CATATCCAC AGCTTAGAAT CAGAAAGAG ATCAAGGTAT
11201 AGTCTGGGG TTGAGAGAG ACCTGGGCT TGCCGGGAC ACAGGGCTCA
11251 GCTCTTGA GTAAGGCTG AACTAAGAGG CTAACAAGGA CCTCTGGAT
11301 GCTGGGAGC TCCCTTGGG AGCTGGGAGC CTGAGTCTGT GTATCTCTC
11351 TCCACTCAA GTCACTGGTA AAGCAGAGTG CCGTTATTTT TAGTGTGTG
11401 GCTGTGTGG GACTGTAAAC ATTAGCTAGT AAGAGACTTA AGGAAGGAGA
11451 TAAACATTA TCTTCTGGGC CTTCCTCAG CTGCCACCTC CGCATGTCAA
11501 GATGCTGTTC TCTTGCACT GCGCAGGCAA CCAAGCCTGA GAGTTATGGG
11551 CTGGAGGGT GTAGGTTTG TGCCAGAGA GAGGGCGTG GGTCTGTAGC
11601 TTTGGGGCTG GCTGGCTTGG TAACCTCATC TCAAGTCCAG GATGGAAGG
11651 AAGGTGGGGT CATGTCAACA TCTGCCAGA TCTGGAAGAA GCAAGCCCCC
11701 CAGCCACCAG GCAAGGCTGT TACAGCTTCC TTGAGTGCT CCGTCTGGA
11751 GGTACTGGC CACATCCCTG TGCCGGGAC CAGGGGATG CAGGTGATCT
11801 GGGAGTTGG AGTTACTTGG GGTCTCTCTG GCTGCATCT GGTGGTGTG
11851 CATGCTGAC CAGGCACAG GAAGGAAGGC CTGACCCAGA TCTTTGGGCA
11901 GCTTGGAGC ATTAGCTGG CAGCAGGAAC TAATCTCTGT CTGTCCCCAC
11951 CTCTTTCCAC AAAGTAGAGC TGTGTCTAGA GGGAAAGTTT AGGACAAAGC
12001 TGGTTTGGT TAGTGAACA ATAAATGTGA ATTCTCTCTA GTCCATAATC
12051 CTTACATTA CTACACTCA CAGTCTGAG TTTGAATCCC CTTTTATCC
12101 CTTTCTGCT GTGGGATCTT GGGCAAGTGA CTTAACCTCC CTGGGCTCC
12151 GTTCTCTCA TCATCTGGA ATGTGGACAA TCATAGCAIT TACCTAATGG

FIGURE 3D

12201 GATCATGTG AGGCTGTG GAAGATTAC AGAAGCTTT TGCTGTTAG
12251 GGTAGAGCA GGGAGACAG AATAGCTTG CAGCTATGA TGTGAAGGC
12301 CTTGCCGGG CTTGGATAAT TCAGGGTGA CTTGACTCT TTTCTTTTG
12351 ACCCTCTCA AGCTTAGAG TCTTAACCA ACTCTACCA TTTCTTATCT
12401 GGCATATA GCACAGGGT GGAGAAAGAG GCTCTAGGC TCAGACACC
12451 TGATCACTG CTTGTGTGT TTACCTTAG CAGATTACT TATCTTTTA
12501 AACCTGTTT CTTGGTATA TAATAGAGT AATCAGATC CTACTTCACA
12551 GAGTTTCTG AGGTATGAA TATGGTATC CATGCCCTG CTTGACATGT
12601 AGTCAGTCA TAGTAAGCA TTGTTATGG CACTACTGT ATTAGTAAAC
12651 CTTTATTAAG CTTCTGTTA CAGAAAGAC TCTAGAAAG ACTACCTGGA
12701 AAGGTACCC CGCTTGGAA GAGCTTGCA CTGAAAGATA ACTGATGTA
12751 TATATGATG GAGATCTGT AGAAGTGCAT TGGGAATCG GGGGGGGGG
12801 GGTGGAGTAG GAGGGAGAAG TCACAGTCA CCGAGAGAG CAGGGAAGC
12851 TTTATGAGG AGGTGACTTT TGGCAGGAT TCAGCAAGTA GAAAGAGGA
12901 AGGACAGTG GGGAGGCTG TGAGGCTCC GTGCTGTGAG TAGCATCTC
12951 TCTTCCACG TACTGGAGT CTGCCCTCT GTGGAAGGA TTGACCCAG
13001 CAGCTCACTT GATCTGGGG ACTTGTGGT TTTGTGTTT TCCACCAAA
13051 CCAAGTATC CTTGAGTCT AATTGGAAG GGTCAAAGCT TACAGCCATG
13101 GTGGCCAGA GCACTCCGG GAGAAGCAG ATTTGTGTCC TGGTTCTCT
13151 TTTATATAA TGGCATCAT ACTAATGCA CTTCTAGAT TGTATGAGG
13201 ATAAATATA AGAGGAGCT GCTGGGTGA GAAGTAAGCT CTCAATAAT
13251 GTTAGCTATT ATTATTTTA GTATCATTA TCTTGATCAT CAACCTCTT
13301 ATTATCAGC TCAATTATG TCAGGCTTC CATCAGGACT ATGTAGAGAA
13351 TATATGAAA ACCCTAGGC AGTGGGAGT ATATATTAG TGCCTAGTAT
13401 AACTTAGCTA TTATTAGTG TCTAACAG AAAGAGATTC TGGGCCAGG
13451 GGGTGGCTC AGGCTATTA TCCAGCATT TTGGGAGGC GAGGGGGTG
13501 GATCACTGA GTTACAGAG TCGAGACCA CTTGGCCAAC GTGGTGAAC
13551 CCGTCTCTA CTAAAATAC AAAAATTAG CAGGCGTGT GGTGTGTGC
13601 TGTAAATCCA GCTACTGGG AGGCTGAGC AGGAGATTG CTTGAACCA
13651 GGAGGCAAG GTTGCAGTA GCTGAGTCA CCACTGCA CCGAGCTG
13701 GGCACAGAA CGAGCTCCG TCTCAGAAG AAAAAAGAG ATTCTGGACA
13751 CTTGGACCA CTGAAACCT GTTGTGGTG AAAGAGCACC AGAGTTTAG
13801 TTGAATACCT GATTCAAAT CCGAGCTCT CTTCTACTG CTTGAAAGT
13851 TGCAAAACCT CAAGTCAATT CTTCTCTG AAAAGGTTG CATAACTATC
13901 TATCTGGCC AGGCTGGTG GCTGGTGGT ATAGTTCCG CTATTCAGGA
13951 GCTCTAGTG GAGGATTCG TTGAGCCAG GAGTTTAGG CTTGATCAT
14001 GCACTGCAC TCTTGGCTA GGCACAAAG GAGACCTAA AATGAAAGGA
14051 AAACAAGTT TCTCCAGAT TGCCATGACT TGCTGCATTA CTTAGCAGA
14101 TATATCAAAA TGATATGTA GTACCTGAC TGAAGGAATA TGAATAACA
14151 GTTACACCA AGGAGATGG ATGGTGTAT GCTTTTGTG TTTCTCTCT
14201 GCTTTTAGAT CAACAGAAC TAGAAGTGA GCTCTGATA TGTGACTTC
14251 TGAACATCC AAACATCGT GAGTGCTGG CATTGGAGA TTTTGTGGT
14301 ATTTTGTGA AGCAGGATA ACAGATATC ACTGCTTTG TGTGTTGGT
14351 CACTCTGTC TGTGACCTT CACTGGTGT CTGTTTATC ATGAGCAGGA
14401 TAGCACTGT GTCTAGAAT TCTGGGGAT TCTAGTTTAG AGACCTGAGT
14451 ATCTGCATCA CTGGGCACT TTTCTAGGC TGGGGTGTGA GGCATCAGAA
14501 TAGGTTTCAG ATGCTATTT TTTCTTTCT CTTCTGCTT TGGGCTGAG
14551 GTCCAGGTC CTCAGGTTG GAGGTTCCG CTTCTAGCC TGCAGGCTC
14601 CTTCAACAG GGCATCCAC AGGCTCATG CAAGGCTAG GATTTTGTG
14651 GTGACCTGA AAGAGTTTG TTTCTGCTG GGTGCTCTG AACTCTGGG
14701 GGTTTCCATG GTGCTCCAT TTGTTATCC CAGAGCCAG AAAGCAAGCT
14751 GCGGCTCTG CTTGCTCTC TGGCAGAGG GATGGCAGGA ACCACTCAGT
14801 ATGGGAGAG AGAAAAAGA GATTTCTCC CTGCTCCAC CTTGCTGGG
14851 GGCACAGAG CACTTGTGT GTTGTGCTA AGCTTAGGA GGTGTGCTG
14901 CTTCAACCA CTTGCTCTA GTTTTACTT GTTCAGCTA AATGTTCTT
14951 GCGAAAGCG TTGGCTCTG TTTGTGCTC CTTGAGAGG GACAGAAAC
15001 TGGGCTGGT GCAGTGTCT AGCAGAGCC CCAGTGTGA CTTGAGGAG
15051 AGCAAGGAG ATCTCTAGG TTTTCCCTG AAGGCTGAG TCATCAAAA
15101 AGCAACAGG GTTCTGTGC TCTCAGGCA TGGCTAAAT CTCAGGCTC
15151 CTTAGGTCG CAGAGGCTG CTTGCTCTG TCTGTGTGG GCGAGGCTG
15201 TGAGGTGACT TGCTGAAGC TAATGCTTC TTCAGAGTA CCGAGCCCT

FIGURE 3E

15251 GGCTTCCAG GTCTCGGGCT AGAACAGTCA AAGTGAGCTC TGTCATGGAA
15301 GGGCTGAGGT CCTGCTCTAG CCTCTGGA GAGGAGCAGC TCTGAGGTAG
15351 TCAGAACGTC AGCTGTGCAG GGCCTTCTAG ATGGCAATCA GCAGCTTGA
15401 TTACACCCGA AGCAGATTGG TTGGGOCAGT GGTGATGGC TTGGCTGAT
15451 GCAGTGTGT CTGCAGAGCC AGCACCTCTC AGCTGGTGGG TTCTGGCCCG
15501 CAGAACTACT GGAGCTCCTA GGTGGTTTCT GAGGTTAGGC CTTCACCTCA
15551 AAACAGCCGA GTGGGGACTG ACATGTGTGC TTGGTATGGA GAGGGCCAC
15601 AGAGGGAAC ACCTAGAACA GCAGTCACAG ATTAGGCATG TTTTGTCTGG
15651 CTGACTCAGT GGTCTAAAAA TATTTTATT ATTGGCAAT ATTTAAAAAT
15701 GAGATTTCAC ATTTTGA AAAAAGAAAAAT CTATTTCCCC GCCTTTCCAG
15751 TCAGAGGCT TGGCTCTGCT GAGCCCCAC CTTCATGGC CAGAAGGAGC
15801 TGTGAGGAGC GGTGGCTGCC CCTGCAGCCC GCTGGCCACT GTCCCTGTCA
15851 CCCACTATGA GCTCACATTT GCATTACCCA CCTGGGCCCT TGTAGGCCCT
15901 GCAAGCTTGT GACCTCTAAC CTAGAAGTTC CAGAACAGGA AGAAAAACA
15951 TGTGGGTGAC TAAAGCCACC CATAAGCACA GAAGCATTTT GATGTTCCAG
16001 ACOGGGTCT CAATATCTGA GGAGGGTAAC TTCTTTTCTT TTATGCTCT
16051 TGTGACCAAC TGGTACAGCA GTGATAATTT GTCTCATGT AGGCAGGAGA
16101 ACAGCAGCTA GGGGTGAGTG ATGCAGGAAG CAGAACCATG TCCACATCAC
16151 CCGCATGCG GCGGGGTGA CCATGGGCGG GTTGACCAGC GATGGGTGG
16201 CACGGACCG GTACGGGTAT AATGAAGACA ATTGAGAAAT GAGCAGGAAG
16251 GACAAAAATA GAATCTTAGG TGAAAAAGC CCTAGGTGTC TTTTATTTA
16301 TTTCTAGAAT TAAATACATA CTTTTTTACC CCATAGACTT CACTCTGTTT
16351 GTAGCCCTT TACTTTTACC ATCTGCCCTC GGCTCAGAT GGAGGCAGGC
16401 GGAGGACCA TATATCTGG CCGTCTGCTC AGAGGCCAGG TGGGCACAG
16451 TCACCTTTT GGCCTCTGAT TTCTAGAAC TGTGCTTCA TTTCTAGCT
16501 GCTCCAGGT CCTAAGGAGG TTGGTCCGAG GACCGATTCT GGGGTGAGG
16551 GTGGGCAGAG GGAAGGGGGA GTCAAGACTG TGTCTGGGA GCTCCAGCAT
16601 CCGGTGGGA CCAGGCTGT TGGAGATGTG GCGGAGCTGC AGGTCCAGGC
16651 GCGTGTGTT GCCATGGATC TGGACCTGGC TTGTGGCAGG AGAGGAGCA
16701 ATTTTGTGCC CCTAATTCAC TATTCCTCTT CTCCTCCAC TGCGCTGCC
16751 TTCAGACTG TGACCTTTT GGCCTGCGC TCTTGAATC CATCCAAAG
16801 GAAACAAAC GGGCCAGCC AAGAACAGTG CACAGTGAG GAAGCTAGAG
16851 CAAAGAGCAT GTGGTCAGC CTGCTGTGG TCAGCTCCG AGGCACAGAA
16901 TTCAGATGA GCATTGTGG CTAGGGGCA GTCATGCCA GTTTCCCTT
16951 AATAGCTAGT ATATCTCTG CTAGGAGTAA AAGCCGTGT GGAAGAGTGA
17001 AOCCTGATAT AAACCTCTGA CTTTGGGTAA TGATGATGAG TCAATGTGG
17051 TTCATAGAG GTAACAAATC CACCACCTA GTGGGAGATG TTGATGGTG
17101 AGGACACTG GCATGTGGG GACGTGGGT ATTGGGAAT GTCTCGGGT
17151 ATTTGGGAAC ACCCTGTACT TTCCGCTCAA TTTTGGGTG AACCTAAAC
17201 TGCTCTGAAA ATAAAGTTTA TTAATTAAAA ACAACAAAC AAACAACAA
17251 ATGCCGTGTT GGGGTGAAG CACACTGCC AACTCCAAAC AGCGCTGGGA
17301 GTGTGGCCAG TGGTGGGGAG TTGAGAGGAG GAGACGCTG TGTGAGGTCT
17351 GAGGCTGAA TGAAGTCCG TCTACCTGTG ATCTGCCCTG TCCCTGCTCT
17401 CAGTCCCTT AATGAATAGA CTCGTCTTC CTTCGTGCTG AGCTGCCCA
17451 GCAGTTTGA TCATAGCTA GCATTGTGG TTAGAGCAGC ACTTCTCAA
17501 CTTTATGTG CTTAAGACTC ACGCAGGAT CATGTTAAAA TTCAGATTCT
17551 GATTCAGGG GTCTGGGGTA GGACCTGAGT CTCAGCTGA TGCTCATGCT
17601 ACTGGTCCC ATGCCGTGA ATACTTGGAG AAGCCAGTT TTGCGGCTTC
17651 GGAGTCCAT CCAGATTGG GGTTTGAATC TGGGATTTC TAATTAGTAA
17701 CTGTGACCT TGGCAAGTAA TTTAACTCT CTATGCCCTG CTCGTGTTTG
17751 TTATCTGGGT CCTTGTGGG AGTGTGTTAG AAAGGGTCA GCGAGGAAAG
17801 GGGCTAGGA GGGAGATCAT GAAATGGAG ATTCCAGCC CTAGAAGTGA
17851 TCCTCTCAAG ACCCCAGCC TCGACTCAGT TCACAAGTAA TTCAAGCCTG
17901 ACCATTATCC CTGTAGCCA GTACCCATTC AGCTAACAGT AAGTGTAGCA
17951 AAGAAACGT TGCAAAATAA AAGAAACATT GAATCATGAC TGAGCAGTTC
18001 CTACATCCCT GCGCCCATGG TGGGGTGGG GCGAGCCCTG CCACAGTAA
18051 CTCCTGGGG GCAGCTCAGT CCCCCAAG CCCCCATGG AACAGGACCT
18101 CCTTCCACT GTGTATTGC TGCAGATATT TTTAAGCA CAACCTTTTTC
18151 AGTGTCTTTT GGAGAAAGAT TTGTATGTA AATGTGGCA TATTGTGGG
18201 TGGTTTATA AGAATTGGAA ATAGCCACAA CATTTGGGT GTGGCTATCT
18251 CAGTCTTGA AGACATGAAA TATCAAGTAA AGGTTGTAG GTGTGTTGGC

FIGURE 3F

18301 CTGTTCTGTC TTCCAGGTT TTAAAGAAC AGCAATTAGG TTGTTGCTG
18351 AAATGCAGTA AATGCTTTAT ACTCCITTC CCAGATCTTC CTGTCIATGG
18401 ACATGGGCTG GCGCTGTTG GCGTTCATGC CCTGTCITTA CTCTGGAATG
18451 GGCTGGGTTG CAGATTATTT TATTCACGC ATCCATAGTC CCTCTGCTCC
18501 TGCTTCACAG CATGACACAG TTGTCCTTAG TTAAGGCATT TGTTGTAATG
18551 CTGGTTTAAA GCGTGTCTTC CCTCTTCGCC TGGCAGCTCC AGGTGGCAGG
18601 GCGGCTCCT CTCTCTACA GGCACATCCA TGGCATGTAC AGGCTCGCT
18651 GCTCGGGGT AGCTGCCCAG TGGACATTGT CGAGCCAGTC AGAATGGCCA
18701 CAGGTAGTGG GGACAGATTG GAGCTCCTTT GCGTAAGAA TTAGAAGGT
18751 GACTCCCAAG CAACTCTGCA ATATCAGGAA TCTTGATGTT GGTGTTCTT
18801 GCGTTCAAGT CCGGTTCTG CCACTTAGTG TGATTTTGGG CAGGTTTCTT
18851 ATGGAGGCTC AGTTTCTCT CCTGTGAGT GGGGTTATTT ATATGTAAGT
18901 AGCTAOCCTG CAGAGCTGGT GTGAGGGTTC AATACAGTAA TGCAGTGGG
18951 GCCCATGGAA CGATGCGGC ACAAGCAGAG CTCAACTAAG TGTAGTTGT
19001 TAGATTTAGA TTGTTATTTAT CAGAATCTGA TGGGGTGGG TGGCTCAGAG
19051 CTGTGGTCCC AGGCTCTCAG GAGGCTGAGA CAGGAGATGG CTCAGAGCCA
19101 GGATCTCCAG CCGAGGCTGG GCAACATAGT GAGACCTGT CTCTTAAAAA
19151 AAAAAAGAAA TAATGAATCT GCTGTGCTA AATAGGCACT TAGAATGGCA
19201 CAGTCATTTC TCTCTGTGTC TTCTAGTCTC TGTAAATTTT TTTACAAAT
19251 AAAAAAATGT CGATAGCAGT CTATTTCAGA TACAGCTTCC TCCATCCCTC
19301 CTGTGCTTGG CAGGTGCTT GCTCTGGGGC ACACATCAAA GCTGTCTCT
19351 CTGCTGGGTG GCGTAGAAGG ATTAGTCTTC CTTTGTGCT CCTTCTTCT
19401 AATTCCTTTC CCGGCTTCC TCCACCTGG GCTCTGTGTG TGGCTTCTC
19451 GGAGAGGGC AGAGGCAAT GACTCCATGT CTAGGCAGAG GCGTGGGTG
19501 CTGCATCTCT TGGCTGTTC TTGGCTTGC TGTGCTGGGC GGGGCGAGG
19551 TGGTGTGGG CATGGGGTG TGTGGGCAT GGGTGGGGT TCTGGCTGAG
19601 GCAGGGCTCA GTGCCAGGC CAGGCAGAGC TGAGTGGCTC CACTTCTCTG
19651 AGATGGTGT CAGCATCATA CCTGCTGCTG TCGGTTAAT TCCCATGCT
19701 GCTGCTGTTA GTACCTTCC TAATGAGCT GGTCTGTAGC TCTGGGACA
19751 GCTGATTTC AGGGATTAT TTGTATTACA CACTTAATG CTTTAAATA
19801 GCAATTTTTT AATTAAATGG AAAGTCTTT TGAAGGAGG GGAGCAGCAG
19851 CTGAGCAAG ACTCAGGCTG AGGCACGAC TTAGACCAGA GGTGGCAGG
19901 TGAGTGGGGC GGAGGCAATG GCAGGACTTC GAGAGGACTT GATTGAGTGT
19951 ATATGGAGTG TGGCCAGGCT AATTTTATG GGAGGAGGC AGGGGCTGG
20001 GCTGCTTCC TTCTCTGT CTAAAAAGC CCTCTGTCA TCTGAGGCC
20051 TAGGGAAGCA TCTCTTTGC CAGGAGAGA ATGTATATG GATATATACA
20101 TTATATCCAA TAATGGGAGG GATATTGGAA GTATCACCCTG CCTTTGATCC
20151 CGTTCCAGA AATACGTAGA TTGGGATGG ATTTTGGGG TTGAGTCACT
20201 AGATTAGATC AAATAGTGA GGTAAATGGA TGGGAAACA GTCTGAGGC
20251 CTTGGCTCCG GCGTGGCAG GCTTGGAGT CCTCAGTCA TCAAGGAGGA
20301 GAACAAGGGC GCTATAGTGG TGGTTCAGTG CCTCGGACT GTGCGGCTG
20351 GGTGTATAC TTGCTTTCT GAATGATCTT GCTTGTGGG GAGGGGACAT
20401 AGGGAAGCAC CTCAGCCTG AGGAAACGTG TGCACTTGA AATGGAAGCA
20451 GCGAGGGCCC ACCAGGAAG AGACATGGCC ATTTCTTTGT CTCTAGCAC
20501 TGAACCTGTT AGTTGGTGT CAGGCCATTG CTAAGTGTCT CCAAGGAGT
20551 CACCTGTAC TGCCAAGCT TGGAGCAAAG GTCAACCGA GGGAGGCTT
20601 TGGACAGAA GTTCCCATC AAGAGAGTTC ACCGAGGGG AGGACAGGA
20651 CAGTCAGCCA AAGCGGAGTC GTTCTGCTAT TGAATGATG CTCAGGGGT
20701 GGCATTTAAC CAGAGGTGG CTTTGTGGG AGAACTTGA AGAGGAGAC
20751 TCAGAGACT TCAGGTGGT TTTTACCCA AGAGCTTTG AGGCGGGAG
20801 CAGGAGGGA TTCCGCTGC CAGCTTTTC TCGCAGCTGG TGCATCGCC
20851 GAGCTTCTT CAGTGGCAC CCTCCGGAC CTGTCTGGA TGCTGCTTA
20901 GGGACATTG TAAGTGGTCT TTCTTTTGA TGCCAGGGCT TTGTGCTG
20951 AATATGGGG CTGCCCCACA TTCTTAAGG GAAGCAGTGG TGTAGCCAC
21001 AGCTTTTGA GTACAGTAC ACTGGATTCA CATCTTGAC CACACTTAG
21051 AAGCTCTTT GCTTTGTTA AGAGACTTTG TGTCCCTGAG CCTCTGGTG
21101 CCTCATCTGT AGAATGGGAA TAACATTCAT CTCAGGTGTT CCAAGGAAT
21151 AATAAATCC TCAAGGCAG GCACTCTGTC TGTCTCTCT GAATCCGCT
21201 GCTTAGCGTG GGTCCAGCA CATAGTAGGT GCTTGATAAA TGCTTGCAG
21251 ATCAGTAATG TATGCAAGAG CCTAGCACA GCGCTGGCAT AGTAGCACT
21301 TAATAAGCTG TTATTTGTTT CATTCGCTGA ATGTGTGCGT GCGCTCCAG

FIGURE 3G

21351 GCTCACCATC CATTATCCTG CACCACGTGC CTTCCTGCTG AGCTCTGCTT
21401 TTCCACCTTC TTCCCCACCC CTTAGTTCCTG CTCACATTTA CTGCTCTGGA
21451 AGAGCTCTCT GGCCTTCCTA TCIGGTCATT GTTGTCCTCT GCGTCAACA
21501 TTGCTAGGTG CTGCTCAGGC TGCATCTCAC CATGTGTCAT CATATCCAG
21551 GACCACCTTC TGGGAGACCA GCGCTCTGGG AAGGTTCCGG CTTTCTCTCA
21601 TCTGTACTTC TTAGCCATGA AGCTTTCTCT TCTTGCTTGA GTCTGAGGTG
21651 GCAACACAGG GCGCAGGCTC TGGCTCCAGG GCTGCATAGC CTGCACTGG
21701 GGGGCACTGG GCACGTCCGC ACTTCCCCCC ACTGCTCTTT CTGGAGAGCC
21751 CTGTGAGCCG GACAGGATGG GGCAGGGGTG GGGCTGCTGA GGAGAAGCCT
21801 AGGATTTCCA AGTTTCTCTT CTGTAACTT CTGTCCCAT CTCTCTCTTT
21851 GCAGTGGGCC TCCATGACAG TATTTCTGAA GAAGGTTTC ACTACCTGTT
21901 GTTGTACCTG TAAGTGCCAC TTTCIGAGGG TGTGGGGGCC TTTCCTCTTA
21951 GCTGACTCAA AATGAAGGCT CAGGAAGGGG CCTAAACAGG CTCTCCAGCC
22001 TCGCCCCAGG GCGCCCTCTT TTGTCCGAGG GAAAGGATTT GACTGGGGCA
22051 GATTGCTGCC CCGACCAAGG GGGCTCCCAT GTTCCCCAG CGTCCCCCA
22101 GGGCTCTGAA CCGCAGGACA GCATTCCTCT CGCCTTCTG TTCAGCAGCA
22151 GCGCTTGCAC AGATGCCCTT GTCTGTGTTT TCAGTGTGCT GTCTTAGTG
22201 AAGAAATAAA AGACAGCTCT TTGCATGACC TTAATAATCC TGAGAATCA
22251 GAGGTAGCTT TCATTAGTGG GAAACCCAGC TCCATTGGAT TGGGCTCTCT
22301 CTCCAGCTTG GTTGTGGTTT AATGTCCTAA AAGTGGCTCT TAOCCTCTGG
22351 ACATCTCTCT CAGGATCTCT CAGGGTTGGG TCTCTGTGTC ATTGGTCTCA
22401 TTACTCTTCA ACTTCAGTAG TAGCTCTGTC CTTCCTGGGC AGCGATATTT
22451 TAGTGTATAT GTTGGTCTCA AAGCTGTGAC TTTTGGGGTA GGTGACTGT
22501 TTTCTCTTAG ATCCCTGTAT CTTCATCTCT GCGTACTTAT TAGTGAATCT
22551 GTGCATTTTG GAAAAAGAAA TGTCCGGAAG GAAGGCAAGC CCGATGATAC
22601 CTCAGGAGA ATCCGGGTGT CACTGAAGGA TCGAGTGTGT TCTGAGCTCT
22651 CAGATGAAT GCATGGGGAG TTGGGATTTT TCTGAAGCC ATTCTACAGG
22701 GTGACCTGT TTTCTCTTGG ACATGGGGT TGGACAAGG AOCCTTTCTG
22751 CCTCTGACC TCTTCTTCCC GTTGGTTGCA GTGTACCGG CCGGGAGCTG
22801 TTTGAAGACA TTGTGGCCAG AGAGTACTAC AGTGAAGCAG ATGCCAGGTA
22851 GGATGAGGGC CCGAGAGTTC AATGTAGCT CTGAGTTTAA GCACTGAAGG
22901 AAGTCTTGGC CACCTTCCGG GTCCAGCATT GTACCTGTTT GAATAGTCTT
22951 TGGGGAAGCT CAGAATAGCT CTGTCTGGA GAAAGATCT GTTGAAGCTG
23001 GCTAGGGCTT GCATCTGTG GGTGATATTA GAAGTAAAA ATTACAGACT
23051 TCTTAACCCAG GCGCAGTGGC TCATGCCCTG AATCCAGCA CTTTGGGAGG
23101 CTGAGGCAGT TGGATCACTT GAGGTACAGG GTTGGAGCC AGCCTGGCCA
23151 ACATAGTGA AOCCTGTCTC TACTAAAAAT ACAAAAAAT TAGCCGGGTG
23201 TGGTGGTGTG TGCGTGTAT CCGAGCTACT TAGGCGGCTG AGGCAGGAGA
23251 ATCACTTAA CTTGTAAAGC AAGGTGTGAG TGAGCCAGA TCATGCCAT
23301 GCATCTCAGC CTGCGTAAAC GAGCGAGACT ATGTCCCTCT CCGCCCTCTC
23351 CACAAAAAA ATCACTTCCA AATGAATGTT TTACAAAGCT TTTCCAAGTC
23401 TCTTTTACCC TGTAGCCCA GAAATACTTT TTTTGTGAC TACCATGTAC
23451 TCGCCACCAT GCGCAATGTC CCGCTCTGCC CTTTCTCTCT CTTTGAACAA
23501 TTTCTGGTGT CTCAGGCCAC TGTGCTGAGG CTCCTGGCATG ATCCAGAGGT
23551 GCAGAAGACA TGGTTCTGT CCGAGGGGAG TGGAGAGTTC TGGCTGATA
23601 ATCCAACCAT AGAGCCCGGG GAGCTTTGAG CCGCTGTGAC CTTGTCCCTA
23651 GACCACCATG ACCAGCCTTG CCGTGGGGCT CCGCAACTT GAGGACCGTT
23701 CCGCGGCCAC ATGCCCTAGC CTCGCGCTC CCGGAATCC CTGGTGGCTC
23751 CTTCAACCCG GCTCTCAGGT GCGCTGTGAG CCGCTCTCT CCGCTTGGC
23801 TCTTCCCCCA GCGTGTCTTT TCTCGAGGTT GATGTCCCTA CAACCTGGTT
23851 TTGATCATCC TGCGTGCAGC TTATCTGGCT TATGTGGCAG CTCCTGGCTG
23901 TTTCTGAGAG TGGGGGAGTG CAGCTTCTCT ACGAATTTCT CAACCTGAG
23951 AGGCAATGT TTGCTGATCA ACTTCAGATG CTTCAAGCTC GGGAGAATT
24001 CTCAGTGGG GAGATGAAT CAGTGGCCAG CAGGGGAGA CGAGGCTCTG
24051 GGAGGGAGGA GCGAGTATG GCTCAGGGAG CCGTGGGGGA GGAGGGAGAG
24101 CTATAGGGAG GGGGCCCTGA GGGGGGGTGA CTGTACAGT GGGCTTGGCC
24151 TGGCTCTGCT GGCACACTTC GCACCTTTGC CATTTTGGC CAGAAGGGC
24201 TCCCTGCTAG CCGGCTCTG TTCTAATTAT ACATCTCTGT GGAGACTGCG
24251 CTCTATAGCT CAGTCTTAAA GTTCTGTGTT CCGCTCTCTG GCGTGTGTC
24301 TATGGGGAGG CCGAGTTTC AGCCCCAGG GACCCAGTAC GACCCCTTGG
24351 TTTCTGTGGC ATCCCCAGCA TCAGATTTTA GGAATAGTAA GTCCAGGCA

FIGURE 3H

24401 CCCAGCCCCA TACACTGGGA TGCTCTGCAG ATGTGCTTAA TATACCAGAT
 24451 AGTGGCTGAT GACGGGGGTC TATATCTTAG GCCAAGTTCC TCAGGCTTGG
 24501 TGCTACTAAC GTTTTAGGCC AGGTACTTCC TTGTGTGAG GCTCTCTCTG
 24551 TGCTATGTGG CAGACATTTA GAAGCATCCT TGGCTCTGTC CCACCAAATG
 24601 CTGGGAGCAC CCTCTCTCCA GTGTGACAA CCAGAAATTT CTCTAGGCAT
 24651 TGCCAAATGT CCGCTGGGGT GGGGGGGGGC GGGCGGCAA TTCATTCCCA
 24701 GTTGAAAACC ACTGCTCTAG ACTGCCCCCG CTCCTGTCTA GGAGTTTGAT
 24751 GACAGGATG GCAGGATGGT TTGCTATGIG GACAGTCTGA TTACGTGTG
 24801 TGACTGTGGC TGGGCGCAGT GGCTCACGCC TGTAAATCCA ACACTGAGAG
 24851 GCCAAGGTGG GTGGATCACT TGAGCTCAGG AGTTCAAGAC CAGGCTGGGC
 24901 AACATGGTGA GACCTGTGCT CCACAAAAAA ATACAAAAAT TAGCTGGGCA
 24951 CGGTGGCTCA TGCTGTGTGT CCGAGCTACT GGGGAGGCTG AAGTGGGAGG
 25001 ATTGCTTGAG CCCAGGAGGT CAAGGCTGGG GTGAGCTGTG TTACGACAT
 25051 TGCACTCTAA CCCAGCAAC AGAGTGAGAC CCTGTCTCAA AAATAAATA
 25101 ATAAAAATAC TTGGGTTTTT TTCTCTACG CAAATCATC AGAAGTGTCT
 25151 CTTAAATGCC CTGTTTGGAA GCTCTTAAGT ACATGTGTTT TTAAGGTAT
 25201 CTTTGTACTT GTTTTAGCTG CCTTACTGGA TGCCAGACCT CAGGGCAGCT
 25251 ATTGGGTCTT GTCCATCTTC ATTATCCTAG GCACTCAATA AACATTTAGG
 25301 GAAATGAATG AGTGCACCCA CGGCCAAAGT AGCTTAGGTT GTTTAGTTGG
 25351 ACTCTCTCTT CTAAGTTGCC AGCACAAGCT TCTTCTCCA GAACAAGTT
 25401 ACTGTATGGA GAAAGAGAAA GAAGGAAGG ATTGGATGCT CTCCTCTTCC
 25451 TCAGGATCTT GGCCTGTCTC CTGATCTCTT GGAATGAGT TGGTGTGTG
 25501 AGACCTTTCC AGTCAAAAGG GGGTGAGAGG AACCGTTCT AGCGGTGATC
 25551 CTAGAAAAAC CATGTGATCT GCGTGGGCTT GGGTTCTCTT TTCTTTTAAA
 25601 TAGGTTGAAC AAGATGATGT GCAGAGTCTA AGGTTCCAGT GCGGTTTAAG
 25651 TGATTCCTCT TGAATCCGIG GCGGCTGTCT ACATGCCCTA GTCTGCAGCA
 25701 TGTGGTGTGT GATGTGGATG AGGTGGTTTA ACCCTGGGCT AACATTTCTT
 25751 TTCTCTCTGC TTTTTTAGGC ACTGTATACA TCAGATTCTG GAGAGTGTTA
 25801 ACCACATCCA CCAGCATGAC ATGTTCCACA GGGACCTGAA GGTACTACCC
 25851 AGGCTCCGCT CCGTGGCTCT GCTCATGAAG TGTGTGGGCG ACCTGGTGCC
 25901 AGATAGTGGT ACTGCGTAGG CCAAACTAG GCTTCTCTG GGTGACAGG
 25951 TGGGTGCTCA CAAGGTTCTT TGTGTTCTTT CTGAGGCTG AGAACCTGCT
 26001 GCTGGCGAT AAATGCAAGG GTGCGGCGT CAAGCTGGCT GATTTTGGCC
 26051 TAGCATCGA AGTACAGGGA GAGCAGCAGG CTTGGTTTGG TAAGGGTGAT
 26101 CCTGTCTTCC CGGAATGCAG CCGGCGGCTT TCTCTCTCTT CCTGATCTGC
 26151 CTCTCTCTAT TAGAATAGA AGCCAGACCC TTAATGGTCC TGGGCTCCGA
 26201 GATCTCTCTT GCGGTACGC GACTCAGTAC AGTAAGTCTA GCTGTGTCTA
 26251 GCATGCTTTT CTGTGCTGCT GTGGGAAGGA GCTGGAGTTC CTGGTAGGCA
 26301 TAGGCTTTTG CCGTCTGGT CAGATTCCAG GCGCTACAG AAGGCCAGCC
 26351 TGTGAGCTCT TGCTGGCCAT GTGCTGAGAG TTTATGTAGC AAAAGCAGCA
 26401 GGAATAAGAT GGGACTTGGG GGAATGGCT GGTGTGGATT TAACGAGAGA
 26451 GAAAGTGGT TCAGTATGCC TCTGCGCTCT CTTTGTCTAC AGGTTTGTCT
 26501 GGCACCCAG GTTACTGTCT CCGTGGGCTT TTGAGGAAG ATCCCTATGG
 26551 AAAACCTGTG GATATCTGGG CCGCGGTAA GCCATTCOA GCTCTCTAGC
 26601 TTTTGGCTGT TAAGGGGCGT CAACITCCGA TGATGGCAG AAGAGGCAT
 26651 CGCTATTCCT TGCAAGTAC ACAGGTGCT GGTGTATGTG AAATPATGGT
 26701 GTTTGGGCTT GGGATGGCTT TTCCCATCAC ACCCTCTCTC CTGGTACTTT
 26751 CTGGGATGAC ATTGTATCCT TCTGTGAGAG GGATTGGCC AGGCTTAGA
 26801 GGTGGGTTG TGCTAAAGA AATCCCTGGT GTGACTTGGT GAGTGAAGT
 26851 GTGAGGCTA GCAGGAGGGG CTGGTAGCAT AGCATTATCG GCTGGCATCC
 26901 ACTTCTGACT CTGGTATGGC CCGTGGCTTT CTAGGTGGCT CTGAGCCCTG
 26951 CATGGTTTTT CTGGTCTCT CAGGGAAGTA GCGACTGAC CCGCATGACC
 27001 TGTGTGTCTT GTCTGTAGG GTTATCTCTT TATATCTCTC TGGTGGGCTA
 27051 TCTCTCTCTT TGGGATGAGG ATCAGCACA GCCTATCTAG CAGATCAAGG
 27101 CTGGAGCTA TGATGTAAG ACCAGAGAGC CGGGCAGCCA GCGCAGGAG
 27151 GGCAGATGTC CTGCTCTCTG GCTCTGTCTC AAGGAGGAG GCTGTGTTAG
 27201 TGTGTGAGT GATACGGGG TGTACGGGA CTTTGAAGC CCAGGAATGG
 27251 GCATCCAGGG CCAATCTCTT GCGACTCTAT GTCCAGGGA GCACTTTCT
 27301 TTTGCACAGC CTCTCTCTA ACTAAAATTG AGGAGTCCAC TGAAGTCTTT
 27351 TGATCTTTAC TTGCAAGAA TGAGCGGCC TCATTGGTGT GCTGTGTAC
 27401 ACAGGACAA AAGGCTGGA GACTCCCTCC ACTGAGTGG CACCTTGGAC

FIGURE 31

27451 ACATIGCTGA GCTCTGTTC CCTCTAAGT ATAGAGCTGG GCTTAAACCA
27501 GAGAAATGTT GAGTCCCTTT CCCGCTCTAA TCTGATGFTC TGGCAITCTA
27551 AACATGACTG TTCTGTCTGT CTTTCCAAGT CTTTAAAGTTG ACACAGGTTG
27601 TGGAAATAGCC GCAGGGCTTC TCCAACCTCG CCAGTCACAG CTTTAGGTAC
27651 CACAGAGTAT CCAATTACA GGAGTTGAGT TGAAGACAGA ACCAGTGTGT
27701 CAGGATATGA AGCTCACAA TACCACATTC TTCTCCCTAT TCTGCTCCT
27751 TAGTTCOCAT CACCAGAATG GGACACGGTA ACTCCCTAAG CCAAGAACIT
27801 GATCAACCAG ATGCTGACCA TAAACCCAGC AAAGCGCATC ACGGCTGACC
27851 AGGCCTCTAA GCACCCGTGG GTCTGTGTAA GTGTCTTTGC TAGTGGCCAA
27901 GGAGCTCAGG GGTGTACGCC TTCTGTGTGC CCTCGGCACC ACCCCCTCCT
27951 TCTTACACAG AGAGATTCTT TCTGGGCCCC AAGCAATAAC TGAGCAGGCG
28001 GGCAGAGGAC TGTGTAGGGC CAGGGTCAAT AAATGTACCC AGGAGACTTC
28051 GGGAGGCTGA TGGGGCTGGT GGGCCACTGC TCTCTCTCC CCCACTCATG
28101 GCTGTACGGC TGGGATTGGT TCTGTCTTGT GATGAGGGCT CAGGTGTACC
28151 CTTGTGACTT CCAGGTAGCC GTGTATAGAA AGCAGCTGCG AAAACCCAAA
28201 GTGAATTCOC AAGCTGGGGT TCATACTCAG ATCTCAACTC CACTGGAGTG
28251 GTGACCAAGA TCCAACAAAT CAACAGAAGG GGTTCCTGAG TCATTAAAAG
28301 CATAAAAGCT GAGGCATAAA GCTCTCGCC TAAAGTCTTA GGAGAGTCTT
28351 CTAGGCTATC AGTGTGGGTT GAGTACTCT GTTTTATAC ACAATTCCTT
28401 CAAGCTGAAA TATCAACTTT CAGACAAAGA AGAGGATTTG GTAGAGTTAG
28451 GCATCTTGAC AACCACTAGG CATTAATTAT CTGTCCATTC TGTGTTTATT
28501 AAATACCTCT TTGGTGCTGG TTACCGTCTG GGTGCTGGAG ATACAAAGAT
28551 GAATGAGGCA TGGTCCCTGC CCAAAAGAT CATCTAGGGA GACAGGCACT
28601 CAAACAGGCA GTCATGTATC AATGTACAA GTAGGTACAA GAATCTAATG
28651 AGAGTACAGG AGCTCCTACT GTTCCCTGGT GGTGGTGGGG TTACTGAAGG
28701 CTGCACGGAG GAGGTGACAC CCGTGTGCTT GTTCTTGGCA AATAACGAGG
28751 TCTTCAGAAC GTTAACCTGC AGACAGAGTT TAGCACAGTG AGAGGTTATG
28801 GGAAACTATG GTGAGTTGAA GGAATGTGA GTTGTTTGGT TGTGGATGAG
28851 GCTGCAATA TCAGATGCA AGAGAATGGG GCAAAAGATT CCGTACATA
28901 CAAGTTTCTG CCTCAGGAGT TTGGATTTTA TTCTGAAAC ATAGGGAATC
28951 ATTTAAGGGT TTTAAGAAG AATGAAATTT GCATTTAAGA ACACITTTGA
29001 AGTGTGTAGG AAATGAATTG CCAGGCATGG TGGCATGTGC CTGTAGTCTC
29051 AGCTGCTGGG GATGCTGAGG CAGGAGGATC ATAAGCCAG GAGTTTGAGG
29101 CTGCAGGAG CTATGATGTC ACGTGGAAT AGTCATTGTA CTCCAGCCTG
29151 GGAAGATGG TCAGACCCCA CTTCTTTAAA AAAAAAAAAA AAAAAAGAAG
29201 GGAATGAAA ATTTTAAAA GAAAGGGCT GGAGACAGAG AGCTCAGGAA
29251 GCTTTTAA TAGTGTGAAT AGTCTAAGCA AGACAGGTTG AGGTCTCAGC
29301 AGAGGTAAG GATGGGGAA TGTCCAGTGT GTTGAATTC AAGAGATATT
29351 TGACAGAAC TAAAGGATTT AATCTCTCC AGTTGGATTT GGGGGAGCA
29401 AAGAAGAGAG AGGCCAGGTT TCAAGTTGAG CGGAGAGTTG TACCTCACT
29451 GACCCAGAAG AAAACCAGAG GAGGAGCTTG TTTGTGAGC AAGACGATGG
29501 TTTTCTCTTT TTTTCTTTT TTTTGAGATG GAGTCTCCT CTGTGGCCCA
29551 GGCCTGAGTG CAGTGGGGG GTCTCACTGC AAGCTCTGCC TCCGGGTTT
29601 ATGCCATTCT CCGCTCAG CTTCCGAGT AGCTGGGACT ACAGGTGCCC
29651 GCCACCAGC CCGCTAATT TTTTGTATT TTAGTAGAGA TGGGGTTTCA
29701 CCGTGTAGT CAGGATGGTT TCGATCTCCT GATCTCATGA TCCACCCGCC
29751 TCGCTTCCC AAGTGTCTGA GATTACAGGC ATGAGCCACT GCGCCCGGCC
29801 AAGATGATGG TTTTCAATTT GTGCCCTG AGTCTGGCAA CCTCCAGCCA
29851 GACACATTCA GTGGGTGGTT AGAAATATGG TCTTAGAGAT TAGAAAAGAA
29901 GCTAAAAATT GGAATCCAC ATTGTAGTCA TTTCTGTGTA GTTGGTAGTG
29951 AGGCTGTAGA AATAGCTCT TCTATGCTG TAGATGGGCC TGTCTCTATG
30001 CTGGTTGAGT TCTTACGGTG AGCTTCTATT GCTGTAGTA GAGAAGAGAC
30051 GGCCTACTCA CACCAGCATT TAATGATAGG GAGAGTTAGG GGGCCAGCA
30101 AAGAGCACTG AGAGTGAGAC CTCCAGAAG ACCCAGAAGC TAAGAAACAG
30151 GGGTCTCAG TAAGGGAGCG TCAGGAATCA GATGAGAAG AGTCCCTGAT
30201 TAAGTTGGGG AAGAATCCC TGCTCTGAC CATTAGATGC CATTGTTTCA
30251 TCAATTTCACT GAGACAGTGG AGAGAAAGAT GAAACCTGT TTTCACTGAG
30301 ACGAAAAGGG AGTGAAGGTG AGGAGGGGCA TGGGGAGCTA GGCATTGAGG
30351 TGGGAATAAA ATGSGATAC TTAGATTAG ATGGGCCAGG GGAGCTTTTA
30401 ATGTAAGGCT CACACCTGTA ATCCAGCAC TTTGGGAGAC CAAGGCAGGC
30451 GATCATTGA GGCCACGAGT TCAAGACCAG CCTGGCCAAC ATAGTGAAC

FIGURE 3J

30501 TCCATCTCTA CTAAAAATAC AAAAAATTAG CTGGGTATGT TGGTACACAC
30551 CTATAATCCC AGCTACTTGG GAGGCTGAGG CATGAGAATC ACTAGAATCC
30601 AGGAGGTGGA GGTTCAGTGG AGCCAAGATA ATGACACTGC ATTCCAGCCT
30651 GGGTGACAGA GGGAGACTCT GCGCTAAAG AAGAAAAAAT TTCCTTTTAA
30701 AGATTATATT GGTACGAGC GGTGGCTCAC ACCGTGATG CACGACTTTT
30751 GGGAGACAG GGTAGGTAGA TCACCTGAGC CCGAAGTTT GAGACAGCC
30801 TGGGCAACAT GCAAAATCC CATCTCTACA AAAAAAATA CTTTAAATAT
30851 TAGCTGGTTG TGGTAACTG CCTAGCTTAC TTGGGAGGCT GAGATGAGAG
30901 GATCACTGGA GCGTACAGAG GTGGAGGTG CAGTAAGCCA TTATGTGCT
30951 ACTGCCTCC AGCTGGGCA ACAGAGTGG ATGCTGTTC AAAAAAATA
31001 AAAAAATTTT TGTTTTAAAG AGAGGCTTAA CTATAATCTA TAGAGAAGAA
31051 TCTAGTCCAG AGCAAGAGT TGAAGATCCT TGCTAATGTA GGAGCAAGAG
31101 GTTTGGACAG CAGAAAAAGA GAGGGGCTC CTGAGCCAG GCGAGGGGT
31151 CCATCCCGGG GATGACCATG ATCCCTCTGA GACTTCTATT AGTGTGGAGG
31201 CAGGTGAGG TCGGCTGTGG AGTGGAGTTC TGAGCTGAAA GGGGTCTTG
31251 CTGATGACCT CTCATTTTGC TTTTGGAGAA ATTTACACCG AGGAGGAGGT
31301 AAAATGAGAG ACTTGGGGA GGTAGAGAAG GTGGGGAGAG TTGCTCCGG
31351 ACCTGGAAAG AGTGGGCAA GGGTGAAGGA AAGGATGGA GGAGGCCCCG
31401 TAGGTGTGGT GGGCACTGG CTGAGGTGC CAGGATTGT TTTCTGACA
31451 GGTGTGTGAA GACAGCAACA GCAAGGGGAG AGGGCAAGCA ACCTGAACA
31501 GGCACCCAAG AATGGGGGAA ATATTCTGTT CTGGGCTCAT TTTTGCAGGC
31551 CCTACCTCTT GCGTCCCTG GTGTCTGAG CCGCTGAGGA CATCACTATA
31601 TTCTGAAATT ACATAATGAT GCTGGTATG ACAGCTGAGT CATGAGGAA
31651 GTGTAGACTG TGTCCTATG ACTCTGTGTA AGGAGGCGAG GAAGTTAGCA
31701 GTAAATACAT TGAAGCAAAA TTTCATCCA AAAAAGGCG GGCACAGTGG
31751 CTCACACTG TTATCCAGG ACTCTGGGAG GCGAAGTGA GCGATCACT
31801 TGAGGTGAG AGTTCAGAG CACAGGCTG GCGAATGAG CCAACCTGT
31851 CTCCTACTAA AATACAAAA TTAGCTGGT GTGGTGGGAT GTGCTGTAG
31901 TCCAGCTTAC TCGGAGGCG AAGACAGGAG AACCTGAGAG GCGAGGCTA
31951 GGTGTAGCG AGATTGCACT ACTGCACTC AGCTGACTG ACAAGGCGAG
32001 ACTCCATGTC AAAAAAATA AAAAAATTACA TCCAGATGA TGAAAGATAT
32051 TGATGCTTCA AGGTGAGAT CCTTAGCTTC TGGGATCATG GCTTCATTC
32101 GCACTGTGCT GGGGTGTGT GAGAGGGGC TCTTGGGAG AAGGAATGTC
32151 CTCTGTAGAG AGCAGGAAC CTGCGTCTT CTGCTGTCTG AGCATCTGGA
32201 ACCGAGTAGG TGCTCAGTAA ACAGCTGCTT AAGGAGTAC TGAATGAGGA
32251 TCACAGCCCC CAGGGTACTC TCTGTGTCG TAGCTCTGT TTCCCAAGGA
32301 AGAATAGGAC GGTCTCTCAG CAGCCGCTT AGCATCCGT ATTGGTCTT
32351 CAGGTTCATG TTGTCTTAT GTAACTTGA GTTTGGGTA GTGCTTTAT
32401 TCTAAAGCG TTTTCAATC TGTAACCTCA TTTCTCTTC AGACCACTC
32451 TGGGGTGGCT GAGTGCATGA CCTGTCTG GGCATGGTAT CCGTCCAGG
32501 ACTGTGGGAG GGCAGAGGA TCTGGGCTGG GGTCTATAGC CTGTCTGTT
32551 GGTTCCTAGC AAGCATCCAC GGTGGCATC ATGATGCTC GTACGAGAC
32601 TGTGGAGTGT TTGCGCAAGT TCAATGCCG CAGAAAATG AAGGTGAGT
32651 TGTGTTCTAG GCTGCCAGC TCTTGACAT CATGCCCTG ACCAGTGTG
32701 CTCTGCCCC ATTTCAAGG GAAGCTTCCC TCTGGCTGG AGCTGGGCTC
32751 TGAAGGTGT ACATGTACA GGGGAGGGG CCCAGAGGC TGAATCTTC
32801 AGGCTCTAGC CAGGACCTG CTTTGCTGA GACAGGCTG CCGTTTCTA
32851 GGTCTCTAGT GAATTCACAG GACCTTCTC TTTCCCAAG GTGCTATCT
32901 CAGGACATG CTGTCTCTA GGAATCTCT AGGTATGTTT TCCAGCTGT
32951 GTACTTTTAT TATGCCAGG TGAGTGGATC AGGAATGGG TGTGCTATC
33001 CCGGGCACCG CTGGGTTCCT TCGGGTCTT GGGCACACCT TTGACAGGG
33051 CAGGTGAGGA TCTGTGTTG AGGGGCTGCT GCTGTGCTG AGTCTGTCTC
33101 CTGAGATTC GGGGCTGGA CTCACATTTG TGAATGTGTT CCTAGAACTT
33151 CCAAGGAGT AGCTGCCCA ACTTGTCTAT TACCTGTGTT CTCGTGATC
33201 TTATTTAACT CTCGAGAGC TCTCAGCACT TTACAGATTT TAGCATTTCT
33251 AGGATCTTGG AGGATGTGCT GGGGAAGAA AAGAGAGATG AGGTACAGT
33301 AGTCTCTTCA ATTGCCAAT TGCCCAATC CATTTGCTG CTGGGAGAT
33351 CTCCTACTTC ATTTGTGCA AGTGGAGATG ACTAATAGAA ATTATCCAG
33401 ATGTTTAAAC CTTTGTGCT GACTGTGCT TAAATAGTC CCTGAGATC
33451 TAGCTATAAC AGTGAAGAA TAAAGACCAG CAGGAGAGAG GGAAGGAAC
33501 TTGCTTAAAT TTGCATAAG AATTGGGACA GGTGGGACA ATAATTTGTA

FIGURE 3K

33551 AATCATACTT GACATTTATT TTTAAGATGC AAGACACTCC ACTCCCCCTCT
33601 TGCCCCCACC CTCACCCCAA CCCCATTAT TGTTTGCTTT CAATTGGGAA
33651 GCACAGTGGC TTTTITGTGA GGAAAAGATT AATGTGAGA CTGAAGACAG
33701 AGAGGGCTCT GCCCAGCTTG CCATCTCCCC CGGTCTCCCC TCCCTCTAAC
33751 CCGTTGCTTC ACTGTTTTGG TTCAAGACCC CCCCCTCTCC TTCCCATAT
33801 AAGACTCCCT CCGTTGCTTC CCGTCTGCAC CACCATGGAA AGGGGGTGT
33851 GTGGGAGCCT AAGCCACCAC TCAGTGGGAG CCCTTTCTGA ATACCCGTCC
33901 TGTGCGGCTC GCGTGGGCTG GCTCCAGGTA AGGCGAGGGC CTGGGCTGTG
33951 AGGATGCTGC AGGCAGGGAG CCTAGGGCTT CGTGGTGTAG CCGAGAGCC
34001 ATGGAGCTCC GGAAGGCCAG GCGTGGATAG TGAGCCCGGG GCTGGTGGTG
34051 CCGTCCCTTA GGCTTCTCC TTTGACCTG GTTTGGGGCT TGATCTGTG
34101 TCATGGGTAC CCAAGAGGG CATACGTGG TGTGGCTCCA CCGTCTGCAG
34151 ATGGGAACAG GGAAGCGTGG CTGGCTGCTT CCGGTGGAGT TGCAACTGTA
34201 GTCCACACT TGCTTCTTGT GCTTTAATGA CGCAGCTTCT ACTTTTGGG
34251 TCTACGAGC TTTCCAGAG ACATTGAAGG GCGTTTGGT GTTGGCCCTA
34301 GAGCGAAGCT CTGTCTCTC TCCCCTCTGA GTTGAAGAAA TGTGAAGACA
34351 GTCTGCTGCT TCTCTTTTAG CCGAGCCAGT CAATAGCAAG GCGCCGTCT
34401 TGAGAGCCCG GGCTTCCACA TCAGCTCCCT CCGCATTTTC AGGAACTGG
34451 CATCTGGTTC TCAGGAATC GGGTGTTAGG ACAAGCAATT TTATTCATCC
34501 CTGTAGAGCC TCGTGTCTT ATTGGCCAGA CCTAGACTGG CCGTTGAGCT
34551 CACTTTGGCT TGGTTCAGAG GAGACAAACA ATGTGTCAAG CATTCAGGA
34601 TGGCTCTTTC TGGCTGACT CTGGGACAGG TGAGGACAGA GTCTGTCCCG
34651 AAGCTTCTGC AGAAAGAGGT GTCTATGGAT GCAATCAAGA AGGAAGGGCA
34701 CCGTGTGTTC TCTCTAGGG TGTTTTGTGA GTTGAACCTC AATAGGAGAT
34751 GTGGCTTATC CTGGACTCTA CGAGTTTGGC TAACAGCGAA TCGGGCCCTC
34801 CAGAGTGTAT TGCTTCAGCA GCGTTTGTTC TCTTCTCAG GGTTTATTTT
34851 TTTGGCAACT TTAACCTCAG CACACTGTGA CACACAGACT GAGATGCTG
34901 CCGTCTCTGG CTACCTCCCT TAAGACAGGG ACCGTGTCTT CTGAGGGGT
34951 GGGGGGCATG GAGCTGGGGC CCACAGTAA ACTTAGCTGC ACAAGGGCCA
35001 CAGACCTCC CTGGGACCC CAGCCAGTTC CCGTCTAGT GTGGATGTA
35051 GAGAGGGGAG AGGGCTGCTC TGGCCCCCG GCGCTCTCAT CGTGGCTCA
35101 TTTAGCTTCT AGGGAGGGA GGCATAGAAG GGAGGGGCTT TCATCACAGC
35151 CTAAAGCTAG GCGCGGCTA CCGCAGAAG GGCACCTGC TCTCACCGG
35201 TCAGGCATTT CCGTGTGGAC CCGCTCCCG AGGGGGTCTT GAGACAGGCA
35251 CTGAGCCCT CTCATCTGG TGGGGACGCA GTGTCCCTA TGGCTGGCC
35301 CAGCCCGTTC TTTCCAGGC CCGAGACTGC TGCGGGCTG CCGTCCCTA
35351 CCGCTCAGC CTGCCCCCG GCGTCCGCTC CCGAGCTCG CCGGCTTGG
35401 CCGCCCGCC TGGGCTGGC CTGCGGCTG GCGATGCTG CTGCTGAGG
35451 CCGGTGGCT TTTGGGGCT CTGTGCATG AGAGACTGTA TCCCTCAGT
35501 TGGCAGGCT AGCTCCGCC CCGCTCCGC TGGCGGAGC GCGCGGGCC
35551 TGGCGGGCA AGGTACGTG CATGAGTCTT CCGGACCGC CTGCTGGGC
35601 CCGTCCCTC CCGACAGGA GCGCCAGCAT GCGGGGCA CTACACAGG
35651 AGCGAGTCC CATGCTTGG GCGTGAATG GCGATGCCAG ACAGACTACC
35701 TAACTTGGCA TCTGCAAGG CATGTTGTG ATGGAGGCC CTACACAGC
35751 ATGATGCTG GCGCTTGGC AACCTTCAGG GCGAGTAGC CTGGGGCAT
35801 GAGCTGGGC AGCGGAGCC TTGCAAGAG CCGATGCC TGGGAGGCT
35851 GCGCCACA GTGGGCCCTC AGAGACAGT CTGGGCATTG CCGTGAAGT
35901 CCGGTGCTA GCACTAGATT TCCGAGCAC TGTTTAAGAC CCGACAGAG
35951 AGCGGCTC CTCAAAATG TGAAGTCTG CCGTGTGCT CCGCAGGTC
36001 TGAAGGCTC CAGAGTGCAG AAGCTCAGA GCGAGCTGT TCTGGGTTC
36051 CATCTAGCT CTGCCACAC CTGAGCGAGT CACACAGCT CCGCAGCT
36101 TAATCTCTA CCGTCCCAT GGGATGATA AATAACATG TGGTGTCTA
36151 GATCACCTG TCGAAGGCTC TCAGCCCTGC CTGTGCAGTA CAGCTGTAC
36201 CTGGAGCTC GTAAGAAGT CTAATGCCAG GACCCACCC CAGACAATA
36251 AATCAGACC TTAGGATAA GATAGGTAGT AGCTTTTTC TAAGCTCCA
36301 GGTGATCTA GTGGCAACC AGCGTTGAGA GCTGGCTGT GAATGGAAAG
36351 CACTTAGACA GTAGGCGTTC AGGCACAGG GTACACAT TTAATAACA
36401 ACATTCAAAC CCGACAGAC AAGATAAGT CAAAGGCTT TTTCTGGAGT
36451 CAGAACTCT GTAATGGAAG GACCCCTGT CTCACTGGAG AGAGATGGAA
36501 CACAGCTTG GAGGAATG CTACCCAAAG GCGAGGAGG TGGCAGCAT
36551 AGTGACAAG ATGTGGACA CTTACTCAGT ACTGTCTATA TGGAGGCAC

FIGURE 3L

36601 TCTAAGTGCT TTTCATGCAT AATCCACATG GATTCCACC ACTGTTTGT
36651 GATGTCAGCC CTACTTTATC CCATTTTATA GATAAAGAAA TTGAGGCTCA
36701 GAGAGGTAA GTAACTACC AAAGGTACA CAGCTGGCAA GTGGTGAAC
36751 CAGATACAG ACCAGGGCA GGCAGTCCAG GGTATCAGA CAGTTGGGCT
36801 GATTCCATCT CCGTGTGCT CCGAGACTCT CCGCCCACT GTCTGCTACC
36851 TTCTGTGGC CTTTGTGGC CAGCTGGTGT CACAGCCIT CTGGCAGACA
36901 GCTCATCAGC CTGGAGGTC AOCCTATGCC TGGCTAGAA CTGTTTGACA
36951 GCTCATATT CTGCCAGTC CTCTCTGCTC ACAGGTCCAG AGAGTGGACA
37001 CTGGGGAAG GGTGGCAGT AGGACCCAGT GAACCTGGTG AGGACCTGCT
37051 CAGTGAAGG TTCAACCCC TGGCAAAACC CTCTGTAGG TGGTCCCTGGT
37101 TTCTGTGCT GTGTCTGCT GTCTCTGCT CTCTGTGTG AACGTGTGACA
37151 CTCTGCTTCT TGAGAACACT CAGGAGATGT CTTCATCCT TGCAGTTTGG
37201 CCATCCAGAG AACTTCCATG GCACCTAGGG ATGGAGCCCT CACTCTTTCA
37251 CCGTGGCACT CTGCTTCCAG GCGTGGGTG AAGCTGTCAA AGGCAGAGTC
37301 CCGAGTGCC CAGGCGGCTC CAGTACTGAG CATGGTTTCT CCTCTAAGTG
37351 TCGTGCATCC ATGCCCTCCT CACGCGAGAG GAGATCCTGA GGTGCCACCC
37401 TGAGGGCTCT GAGGCCACTC AAGATCCCT TCTTGTCTGAG AGGCTATAGG
37451 AAGTGCCTCT TTGGGGGTT TGGGAGACC CTGGCCCCC TTGTCAGACA
37501 CAGCACTCTC TTGTGGATCT GGTGCCCGA CTTCAAGTTG GGGAGAGGGT
37551 ACAATGCAGG AGACTTGATA TTCTCTTTG TTTTCACAGC TGCCAAAAGC
37601 CTATTGAACA AGAAGTGGG TGGCGGTGTC AAGGTAAGTG TCTCCAGCCT
37651 CTGAACGAGC TGGCTCTTT CTCCCGCAG TCACTATGGG AATCTCTGGC
37701 ACGTGGTTCC CCGTTTCCA GGGAACTTC CTATCCTTG TAGTCTGCTT
37751 TAAACAGAT GCGTTTGTG TCAGAACAGA AGGTCTGCT GCGTGCAGC
37801 GGAAGTAGG AGGTATTTT CCGGCCCTA GCTGGATGGG AATGACTCAG
37851 GGAAGTAT CCAATCATA GTTTATACA GAGCTGAATC CGGAACCTGA
37901 CTCTACAGC GATGCTTCAT CTCCAGGCT TGAATCTGG TTTTITAGGT
37951 CATTTGGTGA TCTTCTTTT TTCTCTTTT AGAGCACAAA TCTTTTAAAT
38001 CAAATGAAAG CCAATTTGC CTGAGTATT CAGGCAGGGT ATAGGGCTTG
38051 GAACCTGAA CCACTCTCT TTGTGCTTT TTCTCTCTT CTACAACT
38101 TTCAGATCC ACTGAGTGA ACAGCTCGA GCTTCTTGA CCGATAGGCT
38151 CCTCAGAAA AGGCAAGGC CATGGTGGT CAGGGCTTGT TCCACTGGG
38201 TGAGGAGCT TTTCCTATG GACTGGGCA AGAGGAGGA CCGGGACCC
38251 ACCAGGAGC CTGCTGGGA TGGCTGCTTG GCGAAGTAG AGGAGAGGTG
38301 ACTGGGGCTA CCGACAGGC CCAAGACAT CTGTAGATGC TTTGGGGCA
38351 GAAAGGATCC TGGGGCTAG GCATGGGTA GAGCTCATG CTATCTTGA
38401 GCGTCCAGC TTACTCTTA GACTAGATT TCACCTGGCC TTTTCCCAAG
38451 ATCTTGTGTC AACAGCTGAG ATACACACAC AAGCCCGGT CCGTCCCGT
38501 TCCCTCCCA CTCCCTCTC TTCTCTCAT TCTGTGATG CCGCTCTCTG
38551 TGTCTTCCG CCGCTGCGG GGGAGCTTG GCTCCGCGA CACCTCTGA
38601 CATGGAGCTG GGGCATCGT GCGTCCCA AGCTCTGCG CCGAGCTACA
38651 TGGATGAGC CAGGTGAGG AAAGGGGAG GTTTAGTTGG AGAGAGTGT
38701 TAATAAGTAC CTGTGAGTA GATGTCCAG CAGCAATCTG TTTCTAGGGG
38751 TACACAACAG AGGTGTAAGA GGGGGTGTG CTTTCAGTGC CCATAGGAAG
38801 GGGGCGCAC CTGGAGTCG CTGAGGCTG CTAGTGGAC CAGCGAGAT
38851 GGTITAGTCC AGGAAGCTCA TAGGAGAGG CGTACTGAG AAAGCTGAG
38901 GGACATAGG GAGACTACT TTGCAGTTT ACTTTCTGCT ATATGTTTTC
38951 TTTAAATGA AAATATGGT CAGGCTTGT GCGTCACTC TGTAATCCA
39001 GCACTTTGGG AGGCTAAGG GGGTGGATC CCGGGGTCA GGAATTCAG
39051 ACCAGCTGG CCAACCTGGT GAACTCCGT CTCTACAAA ATACAAAAT
39101 TAGCCAGTCA TAATGACCG TGCTGTAAAT CCGAGCCACT CCGAGTCTG
39151 AGGCAGGAGA ATGGCTTGAA CCGGGAGGC GAGGTTTGA GTGAGCCAAG
39201 ATTGGGCAAT TGCACTCCAG CCGGGGAGC AGAGCAAGC TCCGTCTGAA
39251 AATAAAGAAA AGAGAAAAG AAACAACATG ACATTTCTAT AACTTAAAA
39301 CAACAAATTA TATTTGTATG GGTCTCTTA TACATATGA TGTCTCTG
39351 CAGTGAGAA CACAGGTTG GTGTGAGAT GATGTCAAAA ATATGTTTGG
39401 ATCAGTCTTA TCAGGCAGAA TTGGAAGTT CTGTGTGAGA CCATGGGAAA
39451 TACCATAGGC CATGAGCAG GGAAGCTATG GTGAGATGC TGATAGAAAT
39501 GATTTGGCAA GCGGGTGGG GTGGCTTAC TCTGTAAATC CCAGCATTTT
39551 GCGATGCTGA GCGAAGAGA TTGCTTGTG CAGGAGTTT GAGACAGCC
39601 TGGGCAAAAC CTGTCTGTG AAAAAAATA AAAAAATTA ACTGGGCATA

FIGURE 3M

39651 GIGGIGIGCA TCTGTAGTCA CAGCTACTTG GGAGGCTGAG GTAAGAGAAT
39701 TGCTTAAGCC CAGGGAGITT GAGCCTGAGG TGAGCCAGA TCAAGCCACT
39751 GCACCTCTCA GCTGGGIGA CAGTGAACC CTGGCTCATA AAAAAAAAAA
39801 AGATAACCTGC TGTGCCCTTA GAAGTGGGA AGGCAAACT TAATCTACCT
39851 TTTAAGGTGT TTACAGTGGG AGAGACACAA GGCAGCTACT GTTCTATGG
39901 AGTCTGTCAA GGTCTCAGGG AGGTGTGCAC CTGGCAGGTG CTGGGGGAGC
39951 AGACAGATAA ACATCCAAAC CAGGACAGGA ATCTTCTGGA AGGAGATGGC
40001 CAGGAATTGA GCTTGAGGGA GTAGCTGGAT TTTGCTGGGT TAAGGAGGAG
40051 ACAGGAGGGG AGGGATATTG CAGGCAGAGG GAAGAGGGCA TGTGAAGATA
40101 CACGAGGTGT AAACAGCATG ATGATTCCTG GAACCTCAGT ATCTTCTTTA
40151 TGGCTGAAGG GAAGAGCAAT TGCATAAAAT GAGACCTGAA ATAAAGCAGT
40201 GACTGTGTAG GTGGAGGGGA GAGGATGGAA AAGGCACCAT TACAGAACAG
40251 GTTCTTAGCC AAACCTTTCTA GATACTACTG GTGTCAAGA TGAAGGTGAT
40301 GTGCAGCCAT GTAAGATTAG CCCAAGGAGC CAGCTCAAAC CATGCACATC
40351 CAGGGGCCAG CTTGGAAATC ATGTTCCTGA GGCCTTGGCT GGGAGGCAGA
40401 ATCTGTGTAAT TTTAAAAACA CTTCATGAA TCCAAGCAC ATGAAGGTTT
40451 AAGAGTCTGG TAAAGGCAAA ATTTTGGGGT TATGTGTAA GAAAGGGCTG
40501 GAACAAGAGT CGGCAAGGA AACAGAGGAA GGACAGAGAG GTAGGGGGAA
40551 AAGAGAAATG TGCAGCAGCT GCAGCTCTTC CAGGAACCTT CAGGATGAGG
40601 GCTGGGCAGA CACATCATTA GGTAAAGGCT TTAATGAGG ACGTGGCTGG
40651 GGAACCTAGC CCTGCAATGT GTGTGTGTG TGACCTGAT ATGTGCTCAG
40701 TAAATGAGT TTAATGCCACA TTCTTTTGTG AAAAGAGCTT CAATATCATG
40751 GTGGGAACCA GAGGCCAATG ATCAACCAAA ATTAAAGGC CAACCGGTA
40801 TTGCGAGCGG TTGTGATGGG AGGGGTTAAT ATTTTATTTG AAAGAGTTTC
40851 TGTGACAAAT AATCCCTCTT AAAACCCAGT AGAAGCTGGG CGTGGTGGCT
40901 CAGCCCTGTA ATCCAGCAC TTTGGGAGGC CGAGGGGGGT GGATCAGCAG
40951 GTGAGGAGAT CGAGACCATC CTGGCTAACA CGGTGAAAC CCATCTCTAC
41001 TGAAAATACA AAAAATTAGC CGGTGTGGT GGCAGGGGCC TGTAGTCCCA
41051 GCTACTTGGG AGGTGTAGGC AGGAGAATGG CGTGAACCGG GAGGGCGGAG
41101 CTTGAGTGA GCTGAGATTG TGCCACTGCA CTCCATCTTG GGTGACAGAG
41151 CAAGACTCCG TCTCAAAAAA AAAAAAAAAA AAAAAAAAAA ACCAGTAGA
41201 TAGGCTAGGT GIGGIGGCTC ACATCTGTAA TCCAGCACT TTGGGATGCT
41251 GAGGTGGGCT GATCCTTGA GGCAGGAGT TCGAGCCAG CCTGGCCAAC
41301 ATGTGTGAAC CCCCCTCTTA CTAAAAATAC AAAAAGTAGC CAGTAGTGGT
41351 GGTGCACGCC TGTAGTCCCA GCTACTGGG AGGCTGAGAT AGGAGAATCA
41401 CTTGAACCTT GCGGGGGCA GAGGTGGCG TGAGCTGGGA TTACCCACT
41451 GCACCTCCAGC CTGGGGGACA GAGCAAGACT CTGTCTCAA AAAAAAAAAA
41501 AGGAGATAG ATGATCAAG AAAATAACT GACAACCTGA AAACAAGGAA
41551 GTAGACTGG ATAACAAATG TGGAAAAAT TCTAGCCTCA CTAGTATCAG
41601 AGAATGCAA ATTGAAACAA GGTTCCATT TTGGACTCTA GTTAGTGTG
41651 GTAGTAAAA CCAGATGGT CCTTTCTAAA ACAGCCTGTG TGTCAAAACC
41701 ATAAAAATGC TTCTACCTCT TTTTACCTG TTAATCTTAC TTCTGAGAGT
41751 TTTTCTTAAA GAAATAATTC AAAATAGGAA AAAGCTAAAA GCAGAAAAAT
41801 GTTGAACATG ACATTATTTA TAGCTGTGGA AAGATTGGAG GCTGGGCACA
41851 GTGGCTTATG CTTGTAACTT CAGCACTTTG TGAGGCCAAG TTGGGAGGAT
41901 TGCTTGAACC CAAGAGCTTG AGACCGCCT GGGAAACGTA GTGAGACCCC
41951 ATCTCTTAAA AAAAAAAAAA AAAATTAGCT GAGTGTGGTG GAACGTGCTT
42001 GTAGTCCAG CTACTTGGGA GGTGAGGTG GGAGGATTGC TTGAGCCAG
42051 GAGGCTGAGG TTACAGCCAG GATCACCA CACTGCTCCA GCTGGGIGA
42101 CAGAGTGAGG CTCTGTTTAA AAAAAAAAAA AAAAGAGAGA GAAGAAAAA
42151 AAGATTGGAG ACAATTTGAA AAGCCAGTAA GGAGCCAGAC ACAGTGGTGC
42201 GTACCTATAG TCCAGCTAC TCAGGAGGCT GTGCGAGGAC AGAATTGCTT
42251 GAGCCAGGA ATTGAGGCC AGCTGGGCAA CATAGTGAGA CCCCCAATC
42301 TTAATAATGT TTTTAAATTT AAAAATAAAA AGATTTTTTA AAAGCCAGTA
42351 AATGACTAAA TAATATGGG AATCTTACTT AATAAATAT TCAAAAGTTA
42401 TTAATTTTCA TGACCGTAGG GATATTTTAA GTGAAAAATA AAGTGCAGAA
42451 ATGTTTATA TTAAGTGAAG GAAGTGGTAT ATAAAGGAGT ACAGACAAGC
42501 CAGGCACGGT GGCTCAGGCC TGTAAATCCA GCACCTTGGG AGCCCGAGGC
42551 AGACAGATCA CGAGGTCAGG AGATCGAGAC CAGCCTGGCC AACATGGTCA
42601 AACCCGCTCT TTACTAAAAA TACAAAAAT AGCTGGCGGT GGTGGTGGGT
42651 GCTGTAAATC CCAGCCACTT GGAAGGCCTG GGCAGGAGAA TCGTTTGAAC

FIGURE 3N

42701 TAGGGAGTGG GAGGTGGGG TGAGCCAAGT GCGCCACTGC ACTCCAGCCT
42751 GGTGACAGAG CAAGATTCTG TCTCAAAAA TAAAAAATAA AAGGAGTACA
42801 TACACTATCA TTCTAATTTT GGTTCAGAA AACGGTGTG TAGATATTTA
42851 TTCACTATAT AATATGTGGA TAAAAAAGGG ACTGGAAGAA AGCCACTAA
42901 GTGTCAACAG TAACCTCACC AGGTGATGG AATTGAGAA ACTTTTGTG
42951 TTACACATTT TCTGTATTC CTATATTTT CATCTAGATT GTGCACTACT
43001 GTTATCAGAA TTTTITTTAA ATACTATTT TTTTITAAAG TAAAGCATAA
43051 TACCAGGTGT GCAACTCAT GCGTGTAT ATCCAGTACT GGGAGGCTGA
43101 GGTGGGAGGA TTGCTTGAGC CCAGGAGGT CAGCCTGGGC AACATAAGCA
43151 AGACTCCATC TCAATTAAAA AAAAAGAAA AGAGGTAAGA CATGTGCTTG
43201 TATTTATATA TCTTATAATG ATATCTTTT TTTTGTTTT TGAGACAGGG
43251 TCTCACTCTG TCCCTCTGGC TGGAGGTAG TGGTGTGATC TTGGCTCACT
43301 GCAACCTCCG CCTCCCGGGC TCAAGTATT CTTCACCCTC AGCCTCCIGA
43351 GTAGCTGGGA ATACGGGCAT GTGCCACCAC GCGCGGCTGA TTTTGTATT
43401 TTTAGTAGAG ACCGGGTGTC CCAGGCTAGT CTGCACTCC TGAGCTCAGG
43451 TGATCTGCCC GCTCAACCT CCTGAAGTGC GGGGGTTACA GGCATGAGCC
43501 ACCAGGCTG GCTATATATG ATATCTTAAA AGATTGCTTT CTTTTITTT
43551 TTTTITTTT TTTTITTAGC GGAGTCTCAC TCTCACCCAG GCTGGAGTGC
43601 AATGGCATGG TCTGGCTCA CTGCAACCTC GCGCTCCGG GTTCAACAA
43651 TTTCCAACC TCAGCCTCC AAGTAGCTGG GACTACAGGC GGTGCCACC
43701 ACACCCAGCT AATTTTATA TTTTITAGTAG AGACGGGGT TTGCTATGTT
43751 GCGCAGGCTG GTCTGATCT CCTGACCTTG TGATCCACC GCTCAGCCT
43801 CCCAAGTGC TGGGATTACA GGCATGAACC ACCGTCGCC GGCATTTGCA
43851 TTTTITAAAA AGACTGGAG ATTGCTAGGA GTATTAGTGG TTTTCCCATG
43901 CCGCTCTCT GTTTTCCAAA TTGCTGTAT TGTGGCTGCA GTCTTTTAT
43951 AATATGAAC AGGTAAATAA CAACCTATGT TGTGGCTGCA TCAAGGGGT
44001 GAGAAACGAA AAGGAGAGGA CAAAGCAAGA TGTGAGAGT TCGACCTTTC
44051 CAGGCTCTCT CAAAGTCAAG GTTTTATCA ATGTTATGAG GGAGGCTGT
44101 GAGTAGCTC AGATGGCTT GAGCTTTCAG CATCATGGAT TCTTCTTTA
44151 GATCCCATCT TCCCTTCCCA ACTCCCTCT CCTCAATTCC TACTGCTTAA
44201 GTGTCCATAG GCGATTCTT TTTTCACTGT TCAGAAGCTT TCTGCAAGAT
44251 GTTCAAAATA CTAGCATTTG TTTGAGCAGC TAGTCTGTCT TGCTTCTTG
44301 ATTTGGGGGA CTAGCTTCT ATTTAGATT CTTTGAGCT GGATGCCAGT
44351 GACCCAGGT CTATGGAAGA GTAAGAGCCA CTGTGAGGA TGACTGAAGA
44401 GGCACAAC TCTCAGATCC TGAGAGTGA GCACAACITG TGCTTCTGC
44451 TAGTCCAGG CCAGATGGC CATCTATCT TAAAAAAGA AAGCAAGCAA
44501 GAAAAACGAA AGGTATATGT TATTTCCCTA AGTACTATTT GAATTTTAT
44551 GTTAAATTA GTATGAGAA GAGGTGTGAA GCTTTTCCA GCTTAAATT
44601 TAAATAAAT ATACAGTTT TAAGTAAAAG TGAGATATGA TTTTITAGAA
44651 ATCATCTGGC ATTTAGCCAG GCATGGTGT GTGCACTGT AGTCTAGCT
44701 ACTCAGGTG CTGAGGAGG AAGATCCCT GAGCCACGA GGTGTAGGCT
44751 GCAGTGAAC ATGATCATGC CAGTACTTCA GCGCGGCAA TAGAGCAAGA
44801 CCTTATCTCT AAAAAAATAA TAAAAAGACC TCACATTTAG ACAATGTGT
44851 AGTGTGCTGG TTCAGAAGGA GCGCAGCTAT GCATGGCTAA GGCATAATCC
44901 CTGAATGGAG AAGGAAATG AAAAATGTTG ACTAACCTGA GAACAGTCT
44951 TTGAAAAGG GTGATCTCAG GTTCTCATGC AGGCAATTT AGGAAAAGA
45001 GAGCAAGCCA GGAGAAGGCT GAGAATTTAT TCCCAATTAG TCAAAAATCT
45051 GCTTTAAGTC AAGATCTGC AATGGCTTT CACAACAAGC CCGTAAAAAT
45101 CAGCAGAACA AAGACTGGGC CTGGTGTGAG AGTGGCTACG CAGATTTCTT
45151 GCTGGCGTGA TTCAGTGCAA GTTAGAAAC TGTGCTCTTC TTTAGCCTGG
45201 GAAAAAACA AAGTCAGCAA ACCAGCTCA ACTCAGCAA CTTGTGTGC
45251 CTGTATGCTA ACTATAAGGC ATGTGTCTAG GTACTGTGGA AATTGTAAAG
45301 ACACATAGA TAGGAACCTT CCTGAAAGCA GTAAACATTT AGTTGGTAA
45351 AGGGATAAGG AGATATACAC ACACACACAC ACACACACAC ACACACACAC
45401 CCCACTACTT ATATATATGA ATATAAGGA ACTCTTCTT TTTGAGGGAT
45451 CATTTTCAA GTAAAAATC ATATTGAGC ATATTAAAA GCGCACTGTA
45501 AGGCTGTGT GGTGGCTCA GCTTGTAAAT CCGACACTT TGGGAGGCGG
45551 AGGTAGGTGG ATCACCITAG GTACGAATT CGAGACCAGC CTGGCCAACA
45601 TGGGAAACC AGTCTCTCTA CTAAAAATAC AAAAAAAT CAGTGGGGCG
45651 TGGTGGCGG GCGCTGTAA CTCCAGCACT CAGGAGGCTA AGGCAGGAGA
45701 ATTGCTTGA CCAGGGAGG GAGGTGTGA GTGAGCCAG ATGTGCCAC

FIGURE 30

45751 TGCACTCCAG CCTGGGCAAC AGAGTGAGAC TOOCTAAAA TAAATAAATA
45801 AATAAATAAA TAAATAAATA AATAAATAAA TAAAAGGCA ATGTAAAAGA
45851 GGCTAACTA TATTTAGGTT TTCTTTTTC TTTAAATCTA ATTCTAAATT
45901 ATGACCAATT GTCAATATTT GTAGCCTCTT TGGTTGATTA TAATAATAT
45951 CCTGAAAAT GCCTTCTAAA GAATGCTGGC CGCTTGAGGG CAGGAGCAGT
46001 TTATCAGCTG TGTTTACCTG AAACAGCCCT CAGTGTTTGC TGGGCATTGT
46051 TAAATGAATG TGCAAAAGTT GAACGACAGA CGACATATT ACAGGGGGAC
46101 CTTACCCCA GTGAGCTAAT GATGACATTG ATAATTACC TTCATTTTTT
46151 AGACACAGTC TTCTGGGATA TATTTTCAGT GTTCCAGTG GTCTTCATCT
46201 TGATGCGTCT GTTTCACATG TGAACGTAAA GTTGGTGAGC ATCTAGTTGA
46251 GGCTGAGGAA TCACCTGCTTT CAACATTCCT TGTGGCTTAC ATCCCTGCAT
46301 TTTTATGATC ACTGTAGTTT TAATCACTGG CACTCCTGTG TTCTTAATTT
46351 CCACGAATG CAAAATGCAA TAAAAATTC AAATATTGTA AACAGCATG
46401 GCTATACCTA CAAAGGAAGG CCAACATTTA ACTGCTAGGT GATTTTCAAA
46451 AGCTCAGCAT CTTTATGTAA AAAGCATAGT AGGGAATGAG CGAAGTCAGA
46501 AGTCAAAATT TATTAGAGCT GAGGAGAGCC TGTAGTAGCT TTGTCTTTT
46551 CCTGGTGGC TGCCTACTTG AATTTTCAGC AGTTCTAGTA ATGAGAGAAA
46601 ATAAATAACA TTACAGGGTG AGCTAACCTT ATGAACCCAG ACCTGTAAT
46651 TGTAGCAAA ATGATACTTA ACCTCACAGA CTGTGTCTT AATCTCCTTA
46701 AGAGGCTTTT TTTGAGCAAG GCTGAGACAT CTCAGAAGAT ACTAAATCTG
46751 TGCTATGAA CCTGACACA AAAGAGTTCT TCCCTCCAG GGTCTGGAGG
46801 GTGTAGTGC CTGTGGTCC GTGTGCTGTT TAACCTCTG GTGCTGGACT
46851 CCGGCTCTCC CTCCGCTCTT TTCTCCCTGA TGCAGAGCC ACACGTGGTC
46901 GCTAACCTGC AGGCTCTCTG TGCTTCTCTT CTACCTCTT CTTTCCCTT
46951 CTCCTTCCCT CTGTCTGTGG TGTGTCCAGA AAAGGAAGTC GAGTTCCAGC
47001 GGTACCTTAA TGGTGAAGCT TGCTGCCCCA CCAATGCCC ACTCCATGCT
47051 GCTGTGCCC GCTGCCCAGC CAGGCAAAAC TGTCTGCA CGTGGGTGTG
47101 CCTCACTCAT CCTCACTGCA TGTCTGTGCT GTGTGGGCAG GTGTGGCCIG
47151 TCCGTCCAGG CGGGGGCCAT TGCCCAAGGT CACCCAGTAG CCTAAAAAGT
47201 GGACATTGGA AGGGGTGGTA CGGCACCCC TGCTGTGGAG CTGGACAGA
47251 CCCCAGGAC CCAGGGTAGG ATGTGAAGCT GGTAGGGACT TGGGCAAGC
47301 AAGGGAGAGA CCCCACCTCT CTGTGACCC AGAAGGAGAG GCCCCTCTTC
47351 CCAGGCATGA GGAGCTGCTT CCTACAGACT GGCAGCTGGA GGGCAACTGT
47401 GTGGTGGGCA GAGGAGCTGG TTGCAGGCTC CCACTGTGTA GTCTGCTCT
47451 CCTGGCTCTG CCCCCGTGCA AATCCCATTC TCTCTAGCTG TGCCAGTGG
47501 TTTATTTCTG CCACCCAGCC CTGGGGGAC AGCTAACTCA TCTTTCTCAC
47551 GGGACACTGG GCACCAAGGG CAACACAGCA GCTGAGTCA TTATGAAACC
47601 ATCCATTAAA ACCAGAGGTG GGGGCCGGGC GCGATGGCTC AGCCCTGTAA
47651 TCTAGCACT TTGGGAGGCC GAGGCGGGTG GATCAAGG TCAGGAGATC
47701 AAGACATAA CACGGTGAAG CCTGTCTCT ACTAAAAATG CAAAAATTA
47751 GCGAGGTGTG GTGGTGGGCG CCCTGTGCTC CAGCTACTCA GGAGGCTGAG
47801 GCAGGAGAT GGGGTGAACC CAGGAGGCG AGCTTGCAGT GAGCCGAGAT
47851 CGGCCACTG CGCTCCAGCC TGGGCGACAG AGCTAGACTC CGTCTCAAAA
47901 AATAAATAAA CCAGAGGTGG GGCACCTTGG GTGACATCCC AGCCCTCTGC
47951 AGGTTTGTG GGCACCCTGG AGTCCCTTGC CCTGTGAGG GTCTTGGCT
48001 CAGCTGGGAT TTACAGGTAG GGCAGCCCTC TCTAACCAAC CCGAACAGG
48051 TCAGCATCAT TCACTGAGCT AGGTGGGCTT TGCTTCTTGG TGGGAATGAG
48101 AGACAGCAGA GCTCCCTGTA GTTTAGACCC ACGTCTCAC TACTCCTGGG
48151 CCCCCTCTTC TCTAGCCTGT CGCAGTCTGT GGAGTCTTGT TCAGTGGAGT
48201 CACTTGGTGC CTGGCTTGG GTTCCATGCC TAGCCCTGGG TTTGGGGATG
48251 TCTGAGCAT TGACAGCAAG CTGGCGGTGG ACGGCTCAG GTCTGGTCCA
48301 AGAGGCTCC AGGCAAGAAG TAGGACAGTC AGGATGCTTT CTGTGTATGT
48351 CTTAGGAGAG AAGACACACA TTCTAGCTGT CGATGTATCA TCTGTGCCCT
48401 GTGCAGGAT GGTAGCCACA CATTTGTCTC ACTGCCATTT GAAGAACTTG
48451 CAGGCATCAG GCTGCTCTC AGTGGCCCC AACCCACTG GAACCTAGTG
48501 AGATGGAGTA CGCTGGTGTG GGAACATCA GAGGCAAGA ACATCACATG
48551 GATATGGCTC CTGCCCCGAG AGATCAGCCT TCTTCTTTC TTCCATCTTC
48601 CCTTGGCCC TCCCTTGTG TGCCCCCTCG TGTAAATGTT TTGTTTGTTC
48651 GTTGTCTTTT GGTTTTGTGA GATGGAGTCT TGCTCTGTG CCGAGCTGG
48701 AGTGAGTGG TGCAATCTG GCTCACTGCA ATCTCTGCT CCGAGTTCA
48751 AGCAATCTC TTGTCTCAGC CTCCCGAGTA GCTGGGATTA CAGGCATGTG

FIGURE 3P

48801 CCACCATGCC CGGCTAATTT TTGTATTTT AGTACAGACG GGGTTTCACC
 48851 ATGTGTGGCA GGCIGGTCTT GAACCTCTGA CCTCAGGTGA TCCACCCGCC
 48901 TTGGCCCTCC AAAGTGCTGA GATTACAGGT GTGAGCCACC GTGCCCACCC
 48951 ACCCACCATG TAGTTTGTGA AGGCAAGGAG ATATCCCTGG TGGTCATGGT
 49001 GCTGTGGGA ATGTGGGCT GTGTGTGGCC TACTCTGTCC TGGGGGCTGG
 49051 ATTCTGGGAC TACAGCTACA GCGCCGCTGG GTTTCACCTG CCGCTCCCGG
 49101 GAACACTGCC CTCTAGCTG ATCAGGCTTA AGATTGTGCA GACAAAAGG
 49151 TGAACAGCAC AGTCTGACT CTGCTCCCTG AGGTACGTGA ATGCATTTTG
 49201 TGTCTGAAG GGACTTCCAC CCGCATCTC TGGACACCAT CTCTAGGCC
 49251 AGGCATCTT TTCTTTCTC CTCTCTCTT GTTTCAGGCT TGGAGCTGGT
 49301 GTGTGAAGAA GGAATATCAG GTGCTGGGT GAAAGTGCAG CAGGAGACTG
 49351 CCCACAGATA GGGGACCAGA GTTCTGAAT TTTGTCTGC TTCTTTATAA
 49401 ACTACCCCCC TTTTCTCTG ACAGTGGGAA GAAGATCTTG AACTCTCTTG
 49451 GGTGAGGTGT GGATTTTGCA ATGACCTGGC ACCTGGCATA AGCAGAGATT
 49501 TCTGGAGGGA TGCTTTAAAA CAAGGCTTTG GCGTGGTCC ACCCTGAGGG
 49551 TGCCCCCAGA GCTAGGTCTC TGGCCCCAC AAATACTTCC TCTGATCATC
 49601 TTCTTAGCCA TCGCTCCAT CTACACAGG TTATGGAGGC CACCTCAGGC
 49651 CTACCTCTC CAGGCCAGAC CAGGGGCAA GGGAGTCTG GGAGTTGAAC
 49701 CTGAGTGGCC TTGGGGACTC TGGAGGAACT AAACCATCTG TTTTCTGTG
 49751 TCAGCCACAG AGCAACAACA AAAACAGTCT CTTAAGCCCA GCGCAAGAGC
 49801 CCGGCCCCCT GCAGACGGCC ATGGTACCTC CTGACTACAG CTCTCCGCC
 49851 TCTGACCTTG GCTGCTCTC GCGCTTCC TCTTCTCTC CTGTGCCCC
 49901 CTCTCTGGCC TCGTGGCTG TTCTTTCTT GGTCCCATTA GAACGACTG
 49951 CTTGTGTGTC CGCCCTGTAT GCGCTTCC CTCTATGTG CCGCTGGCC
 50001 GCGCTCCATC CCGCATGGCA GAAGTGTCTC TCGTCTCTC GCTCTTTTG
 50051 CTGTGTGGGG GAACAGTGT CAGGGCTCTC AGCTGAACCT CCGAGGCCCA
 50101 GCGCAGGACC CCTAGTGGGT CTGCTGTGG GGTGGGAAG GTGAGTTGCT
 50151 TAGGAAAGGA GAGGGTAGGA GCTTTCTTG GACCTGAACA TCAGTTCTTG
 50201 CAGGCCCTCT GTTAAAACT GCTCAGCTC CTCTTTGCA AAGCCAGAAA
 50251 CAGGAAAGAG GCGTGGGGTC CCGACCTCTG GATGGTGTG AGGTCTCCAG
 50301 GCTCTGGAG TGCTCATGC TGGCTAAGTT CTCTCTGGC TCTCCAGGG
 50351 GTTCTGTGTG CTCTTGAGG TCCCTCTGT AGTGGTGGCT AACTAGAGAG
 50401 TCAGCAGGG GGTGACTGG AAAGAGGAG AGGTGATGT GCGTCTACT
 50451 CCGCTCTCTG CGGACCTCA TACCAGTGA CGTGGGGGG TGGGCCAGG
 50501 AACTAGGGAA GGCAGAGGC GGGCGAGTG GCGAGCTCTC TGGGCTCAGC
 50551 TTGCTAGGG GCGCTCTGT CCGGCTCTT TCTGGGAGC CTCTCTCTC
 50601 TGCCCATGTT CCGCTCTAC ACATTCCTG TGATGAAGC TGTGGGGGG
 50651 GCGCGGCTG TGCCCTCAGT CCGACAGCT CTCTAGTGA CCGCCCCGT
 50701 GGGAACTCCA TGTGAAAGA GCGCTCAGAA CTGACAGGA TCAGGGACAG
 50751 AGGCGCTTGC TGTACGCTC CTGGGCACT GCACTGCCA GCGCTCTCT
 50801 TCTTACAGG CAGTGTCTG TGCCAAATC CAGGGCTATC CAGCTGGCC
 50851 GGGACCCAG TTGAGCGGG ATATTTTGTC TTCTGGAGT GCGTGGTGG
 50901 CAGGCTCAG TGGTATCAT AGGGTCTGG GGGTCTCTG GGTGAGGTG
 50951 GGGCTCTCA GGAAGAGCC ATAGTCTGT CCGAAGTGG AAGGGTAACT
 51001 TCTATCTCT CTACAGGAG CCGCAACCA CTGTGGTACA CAACGTACA
 51051 GATGGGATCA AGGTGAGTG CTCTGAGCC TGCTCTCTG TTTCCAGGT
 51101 AGCAGGAGC AGGTGGGCT GGTCCAGGG GTCTACAGG TGCACCTGA
 51151 GCGCAAGTG TTTGAGAGG CTGAGCTGA GGTAGCTGT GCGCAGGTT
 51201 GCTCCATGCT GAGGAAGGC ATTATACCT ACAGAGCTCA GCGTTGCGAG
 51251 TCAGACAGC CTGGTCTGAA TCCTGGGCT GCACTTAGT ATCTTTATC
 51301 TGCAATTGG GGATGATAAT AATAGAATCT TCTCCATAT GTCCGAAGTT
 51351 TAAATGAGG TAAAGTTCA CTGAAAAAT AGGCAAGAT ATCTCCAGC
 51401 CCGTGGAGGT TCTCCATGG CTGACCCCT TGTGCGCTG ATGTTTTCAC
 51451 CAGCATCTCT GAACATCTGT TAAGCCAGA TAACATCCAT GCGTCTGGCT
 51501 TACAGAGGTG ACAAGACAAA TTATCTGTTC AAACGGTGG TGGGATGGGA
 51551 GGCAGATAAA AAACCAATAA GCAACAGAT AAGATAAGCT GGGCAGCTG
 51601 GCTCACACT GTAATCTCA CACTTGGGA GCGCAGGTG CCGAGATGC
 51651 CTGAGCTCAG GAGTTAGAGA CCACTTGGG CAACATGGT AAACCTGTG
 51701 TCTACTAAAG TACAAAAAG TAGGCAGGT TGGTGGGCG TCGCTGTAGT
 51751 CCGAGCTACT TGGGAGGCT AGGCACGATA ATTGCTTGA CCGGGAGGT
 51801 GGAGGTGCA GTGAGCTGAG ATCAGGCCAC TGCCTCCAG CTGGGCTAC

FIGURE 3Q

51851 GCAGTGGAC TTAATCTCTC AAAAAAATA AATAAGATAA AATCTAATGT
51901 CAATAGGTAA TCTGAAGAAA ATGGCAGAAA GTAGAGAGAG GGCCAGGTGC
51951 GGTGGCTCAT GCTGTATATC CTAGCACTTT GGGAGGCCAA GGCGGGCGGA
52001 TCACCTTGAGG TCAGGAGTTC AAAACAGGC TGGCCAACAT GGCAAAACCC
52051 CATCTCTACT AAAGATACAG AAATTACCTG GGGATGGTGG CACATGCCCTG
52101 TAATCCAGC TACCTGGGAG GCTGAGGCAG GAGAATGGCT TGAACCTGGG
52151 AGGCGGAGGT TGCAGTGAGC TGAATGGTGG CCACTGCCTT TCAGCTGGG
52201 CGACAGAGCA AGACTCCATC TAAAAAATGA AAAACAGAAA AACCTCAACA
52251 AACTAGACAG AGAGAACAGG GCTTGAATT AAGTAGTCAG GAGAGGGCTT
52301 CTTTCAGGAG GTGATATCTG AGCTAGAAAC TGAATGGTGG GTGGGAAGCA
52351 GGCAGCCAGG CCAGCTCTGA GCTGAGTGC CCTAAGCAGA AGGAAGTGA
52401 GCTCAGATGT GGCTTTGTGA ATCAAGCAGA GGGAGAGCA AAGTGAAGG
52451 GGGAGAACCA TAGGAGAGTG ATGAGGTGG AGAAGCAGCA GGGCTGCTA
52501 CAGAGGCCCT TGATAGGAGT TGCACTTTCT TCAGCAGCA AGGAGAAGCT
52551 ATTGGGAGTT CTTAGCAGGA GTAACAGAA CTAGTTGACA CTTTAAACA
52601 CCACCTTGGC CTCATGATCA AGAAGCTAG GAGGCGCGG GGTGGTGGC
52651 CTACGCCCTT AATCCCTGCA CTTTGAAGG CCGAGCGGAG TGGATCAGCA
52701 AAGGTCAGGA GCTCGAGACC AGCTGGCCA ACATGATGAA ACCCATCTC
52751 TAATAAAAT ACAAAATTA GCCAGGCATG GTGGCAGCA CCTGTAAATC
52801 CAGCTACTCA GAGGCTGAG ACAGGAGAA CTCTGAAC CCGAGGCGAG
52851 AGGTGCGAGT GAGCGAGAT CATGCCATTG CACTCCAGCC TGTGCAACAA
52901 GAGCAAAAT CTGTTTCAA AAAGAAAAC TCTAGGAGG AGGTAGTGT
52951 GGAAGTTAGG GAGACCATGA AGCTGTATC ATGGTTTACG TGTGAGATGC
53001 TGGTGGCTG GAGTCAGGTT GTAGCTGTGC ATTGGAAGTG AAGAGGTAG
53051 ACATGGGGTT TACTTTGGAG GCAGAACAG AAGATTTTAT TTTAGATTGG
53101 CGCATCTGAA TATTAAGGGA AAAGAGAAAG AGAAGGATTG AGGATGACTC
53151 CAGGTTTTAG CCTGAGTAAC TGGGTAGATG GTGGCATTTA CCACTGGGG
53201 GAAGACTAGG GAGGGGATTT GGAAGAGTC AGACAGCCAG GGTGAAGCA
53251 GAACCTTCCA CAATTCCTCC TTGCACTCT TGTAGGAGCA GAACTCTGC
53301 TTTTGTCTG CTTTGTCTCT CTGGCTTCCA AGGATGGAG CATATAGAAA
53351 CATGTTCTTT TTGGCTTACA GGGCTCCACA GAGAGCTGCA ACACCAACC
53401 AGAAGATGAG GACCTCAAAG GTAGGTGCTG GCGCTTGGAG GGGGAGGAC
53451 TCCAGCAGTG ACCCAGGTAC CTGGCTTCCA ATGGGCCACC TGCTTTTCT
53501 GTCCCCAGAA CTGGGAATGC TGGCTCTTAT GCGCTAGGA GAGGCTTGG
53551 TATAAAGCT ACCTTCCACG AGCCAAGATA TGAGGCGCT GTCTGGTGT
53601 GCTGAGTTGG GCAAGAGGCT TCTCTCTTT GACCCCAAGT CTAANAATAGC
53651 TAAGCTAGAG ATTCTCCAGG GCGCAGGCT CAGAGAACTG TTCTGTGTG
53701 TGATAATGAT GTGCCATCCA AGAACAGGGG TACCCCAAGT CCTGCGGAA
53751 GTAGCCTGTA AGTGCTATGA GTCATAAATA GAGTGACCAA TCACTCTGTG
53801 TTTTCTCTG ACACAGAACT TTTGGTTTGA AGACTGTGAT GGGCCAGGAG
53851 TGCTGGCTCA CACCTGTAA ACCCAGAACT TTGGGAGGCG CAGGCGAGAA
53901 GGATTGCTTG AGACCAGGAG TTTGAGACAA GCTTGGGCAA CATAGCAAGA
53951 CCTTGTCTCT ATTAATAAAA AAAAATAGG AACAAATAA TAGGCCAGGT
54001 GCGGTGACTC ACACCTGTAA TCCCCACACT TTGGGAGGCG GAGGCAAGTG
54051 GATCACTTGA GGTACAGGAG TCAAAACAG CTTGGCCAAC ATGATGAAC
54101 CCGTCTCTA CTAATAATAC AAAAAAGGC CGGCGTAGT GGCTCAAGC
54151 TGTAATCCCA ACACCTTGGG AGGCCAAGGT GGTGGATCA CTTGAAGTC
54201 AGAAGTTCAA GACCAGCTG GCCAACATGG TGAACCTCCA TCTCTACTAA
54251 AAATATAAAA AATTAGCCAG GTGTGGGCA GTGCTGTGA ATCTAGCTA
54301 CTGGGAGGCG GGAGGTGGGA GAATCGCTTG AACCTGGGAG GTGGAGGTG
54351 CAGTGAGCGG AGATCACCCC ATTGCACTCC AGCTGGGCA ACAAGAGCGA
54401 AACCTCTCT CAAAAAATA AAAAAAATA AAAAAATAG CCGGTGTGTG
54451 TGGCGGGTCT CIGTAATCC AGCTACTCGG GACACTGAG CATGAAATG
54501 GCTTGAACCC GGGAGGTGGA GGTGCGAGTG AGCTGAGAT GCACCACTGC
54551 ACTCCAGCCT GGTGACAGA GCGAGCTCT GTCTCAAGAA AAAAAAATA
54601 AAAAATATAT ATATATATAT ATATATATAT ATATATATA ATATAAACC
54651 CAGATAGTCC TGGGAACACT GGGATGAGTT GGTCACTCTA GTCTTAAGAT
54701 TTTGGCTTGA ATGATGGAGT TGGAACTAAT CTGACAACG TGAGGCCACA
54751 TTTGGTCTAG TCCGTGGTGG CCGTGAAGG CCACTAGCCT AAGCTTGGG
54801 CTGGCTAGAG TGCCAGGCG GTGGAGGGC ATGGCAGGCT GGACCCCGG
54851 GAATCTCTGT CCTGCTCTTT GATTGGGCT CCTGGAATTG CTCCCTTTC

FIGURE 3R

54901 CTGAATTCAG TAAGTACCT TGGGCCAGGA CATCAGAAA GACAGAGGAA
54951 CACTCTAGGA CAGAGCTGG AGAGCATGCC CTGGGIGGCA AGGGGGCACC
55001 AAACCTTTTG GAACCAAAA AAATAGCAGA AAGCTGGGAG GAAGTGAATC
55051 ATAGTAGCTC CAGGCCCTTG TGAGTCAGGT CAGATCAGTT TTGATTCCGG
55101 CACTGCTGGC AACATAGGAG GGGCTGTAC TGCTGGGCTC TGGACCTGT
55151 GGCTTGGGCC CTGGGAACAT CTTCCTGGG ATCAGGGGTC CTGGACAGG
55201 CTGTGTAAAG GCTGTCTGG AAGCCACAGC CCAGGTCGG GCACTGGCT
55251 GGTGCCCTCA GCTGGGAGGC CTCCTGGCA GAGGGGGGG GGTGGGATGT
55301 GGTCCAGTGT CCACAGCAGC CTGAGGGAG GGTTCCTTT GGGGGGCTC
55351 TACAGGCCCA TGGGCTGGG GCTGTCTGG CTGTCTGGT CACTGGCTT
55401 GTTCTGTTT TTTTGGCTGC TCTGCTTGC CTTGGCTGC CTTGGCTGG
55451 CTGGCTAGCT GGGGGCTCC GCACTGGGA TGGCAGCTG GTGCTGAAG
55501 GAGGAGCTC CCGGACAGA ACAGGCCCT CTGAGGCAT GAGGCCAG
55551 CTTCTCTCT GCTCTCAGC CAGTAAAGT GAGGGAGGA CATCTGGCT
55601 TGGTCTTCC TGGCTGTTC TGAAGCCCT CAGGACCCC CACCACAGT
55651 GTAGTCCA CCACCTGCC GTGGTAGTA AGCTCTGGA GCAAGGCTC
55701 TGCTGGGGT GGGGGTACA CTGGAGTGC TGTGTAGAC AGGCAGGGC
55751 CCTGAGTCT GGGGCCAAA GAAATATGAG AAGTGTGGT GGAATAACAT
55801 GGCTGGGAT GAGGGAGTA GAAAGCCCC AGGATGTGA GTGGGCTTG
55851 CCTCAGGCT GAGCCAGGA GAAGGGCAGA GTGGGAAGT AGGCTGTGG
55901 GGGTGGAGT GGGATGATG GGAATCTGT ACAGCGAGGA ACTGTGTGG
55951 GGAATGAGT CTCTCTGAG CTCAGCATA CAGTATTAG AGCATGGGT
56001 CAGAGGCAAG ATAGATCTGA GTTAAATCC CAGCTACCT GCTTCAAGA
56051 GTGTGAAGT TAACCTCCA GAGCTGCAG TTCTTATCT GTAATGTGA
56101 AATAAATGG CAGCAGCTC AGAGCCTTG TAGATAAAG ACAAGGCAGT
56151 AGGAGTCTT GATACGGTC CTGATGGGT TATCAGTAG TCATCTCAT
56201 ATTCTAGT ACCTCTGTC TGGAGATGC CTTGTCTGC TGCTTTTCT
56251 CCAACATCT ATCTTGCAG AGTTCTAAG CACAACCTC TTGGGGGTG
56301 GGGGCCAGT CAGGTATCC AGATGGTCT GGTGGGGTG GAGAGGGTG
56351 GTGTGTGTG GTGCACACC TGCTGTCTC TTTTGAAGC CGATGAACT
56401 CCTGTCTTC CTAACTGTC TGCTGTCTC CTTGAGCTG TGGCTAGCG
56451 GGGCTAGCG CTGTGGGGC CCTCTGGA TGTCCTTTG GCTGTCTGC
56501 CTTGTCCAA CTGTCTGCT TGGCTGTCT GGGGGGGTG GGGGTGGTG
56551 GTGTCTTCT AACCTTGA GTGTCTTGC AGCTTTTTC TCTGTGAGG
56601 AAAGGGTGT GGGCTGGCC CGCCAGGGC TGGGTTAGG ATGAGCCAA
56651 GCTCAACCA AGCTCTCCT TACCTGGTG GCAGGCCCT CTGGTAGTG
56701 CATTCCTAT AAGAGAGCC CATTGGGCA GGACATCAC AGCTGTCTT
56751 TGGCTTTGA TGGGTGGGG AGGAGGCCC TGAGGGGAC CACTCTGCC
56801 TGCTGTCTG TCTGAGCCT GTCTGGTTT CTTGAGAAC AGTCTCTGC
56851 AATGAGAGT GTGTGAAT GTGAGCTTT CCAAGCTC GAGAGGTAA
56901 TGGAGCAGC TCTCTGTAC AGGCTGTCC AAGTTTATC AGTCTGTGA
56951 TCATTTCTC CAGAAAAGC CTGTGAGTT GAGCAGTGG AAGCATCCAT
57001 CTTAGGGTC TGATGTCTT TTGGACCCC AGCCCTAGCT GGATCTGCT
57051 GTAGGCTAC CTGTACCCA GGGCTGGTC CTGGGACAT AATGAGGCT
57101 ACGAGTGGG GTGTGATTT AGAAGTACT GAGCCCTTC AGGTAGAGA
57151 AGTAAATGG GGTGGAAGC GGCTTATTT GAGATGCTT GTGAGAGG
57201 CTGCTCATC AGGGAGGGG CTCACAGAT TCACATGTA CCAGCTCCT
57251 CACTGTATA AGGCAAGCT GTTTCTGCA AACTGTTGT TGATGAAAG
57301 GGAGGCAAG GCAAGAAGC CATACTAAT GGCTGGGCT CAGAGAAAG
57351 TGGTATGTT CTCTGAGC TGACAGAGG GAGAGGGAG GGAAGGTGT
57401 TTCTCTCTC CTGCCAAGG CCTTAGAGC AGAGAAGAG GATGCTTTG
57451 TCATAAGCA TCACAGGGA CTCTGAGGA CTGGGGAGG CTCTCTGTA
57501 CTTGGGAGT TCCCGATG GTAAATGAT GGATTTTCT CCCCACAGT
57551 GCGAAAACG GAGATCATTA AGATTACAGA ACAGCTGAT GAAGCATCA
57601 ACAATGGGA CTTTGAGGC TACAGTAAG TAGAGACCA TTTTTTTTG
57651 TGACCTAAG CATCTCCAA GGCTTCCCT GCTTCCAGC AACATTAGG
57701 ACCCTGGGA AAGGGAGGT GGAAGTTGG CAAAGTATC GAGTTAAGC
57751 CTCTCTTAA CTGGGAGCC TTCCAGGTG ATTCTCTAG CTCACCATG
57801 GTATCTTGC AGTGGGCCA AAGCACAGG CTGAGTGGT CAGCAGGAG
57851 GCTTGAAGA TCTTTGCTG CTGTCTGTC ATGGCCACG GTAGCTGCT
57901 GCTACTGGT AGACACGCT GATAAGGAG GAAGACAAG CACTCCATG

FIGURE 3S

57951 AAGCCIGATA GGCTGCTTTT TTTTTCCTCC CIGTAGGAAG ATTGIGATC
58001 CAGGCTAC TTTCTTGAG CCTGAGGCC TTGGTAACT CGTGGAGGG
58051 ATGGAATTC ATAGTTTAA CTTTGAGAT CGTGAGTGG TTGCTGCTGC
58101 TGATATACIC CTGCTTGCC CTTTACCCCT TTGCTCTCT CTCTGCTCA
58151 CCTTCTCATC CCAGTTGCC ACTTTTCCCT TATTGAACT TGTGCTGCA
58201 CTCTACTCT GTATGCTGT CCCCTGTGC CCGATGGTT GTAGACAGGC
58251 ACCTTTGAAG GCGCTGCTCC TGAGCTTCAA GTGCAATCA TTCTGAGCT
58301 GCTTTGIGGC AGTGGCAGTC ACCACAATCA AGCTCACTTA TTTCTTGGC
58351 GCGGGGGGG CTTAGCGCTG TAATCCCAAC ACTTTGGGAG GCTGAGGCTG
58401 GCGGATCAG AGGTGAGGAG ATCGAGGCA TCTGGCTTAA CAGGGTAAA
58451 CCGCATCTCT ACTAAAAATA CAAAAAATA GCGGGGCTTG GTGGCAGTGC
58501 CTGTAGTCC AGCTACTCG GTGGCTGAG CAGGAGAATG ATGTGAACCT
58551 GCGAGGACA GCTTGCAGTG AGCCAAGATC AGGCCACIGC ACTCCAGCT
58601 GGGCAACAGA GCAAGACTCC ATCTCAAAA AAAAGAAAA ATTATTAAAG
58651 CCTCACCTCT TTCCAAGAG GATTGGAAG AAACCTTTG AGATTAGGTT
58701 GAGATGATCT CAGCACATA GAACTAAGCT CIGTGTCTG AGGTTTACA
58751 ATAGAGGAA TTAATAACAG GATAAGAATG TGCAAAACAG GGCACGTG
58801 GTGATTTGG AGATCGGAG TTGTGGCTAG AATCTTCTG ACTATGGAG
58851 AAGGCAGAG TCTTGTATAG GGGTGGGGT GTACATTCG GACAGTTGCT
58901 GGAATAAAG GGGATAAGAA GCTGAATCAT CACCCCTCC CATCTTCTC
58951 TCTGCTCTAT GAGACCTCC CCTTCTTAT TTTTATCTCT TCCACTTTA
59001 TGTGCGGCT TCCCTATCT GCGCTGAGT ATAGTTAGTC ACTAACTCT
59051 CCGCTGGCT CACCCCTAT CACATCTAG CTACATATAT AAATCTCTG
59101 TTATCTAAGT AATTCTATTA GCCAGAAGCA ATTCCAGAT TTATATTAGT
59151 ACTAGGAAG TGTCATGTAG CCGCTGTCTA ACATTGAAAT TGAATAAAA
59201 TGTGATCTC AATAAAAGCA ACACAGTTT CACAGCTAT GCTGATAATG
59251 GCAATCCAAC TTTCTTTGCT TTTTCCCGAG AGAATCCG GAAATATCTG
59301 AGCTTGGCTG TTTGATGAT CTATTTCAGC TTGTGTGCT TAAAAAAT
59351 TACAAATCAA TTTTGAATGG TTTAAGTTCA TGATTTTGT CTGAGCCCT
59401 AGCTAGGGT GAGCCAAGC TTATGAAATC TAAACTCAGC CTAACAGAAT
59451 AGAAATCTA TAGGCTTTAG TTAAGAGTCA CATGTCTG AGTTCAGGTG
59501 TGTGATTTG GCAATTAAT CCTTGAGCT ATTTCTCAT CTATATAATG
59551 AGAAATATT ATCCACCAAG AAATACAGCT CCGGCATGTA AAACCCAGC
59601 ACAATGCGT ATTAAGAGC CAGCAGTAC TGTACAGTT ACCATCTTT
59651 CTGTCTCTT TGGATAAAG AGACTAATGT AATGTGGCAT CCGGCTCT
59701 GAGGGGGTT CAGGGTTG GGGTGGGG GGGGGTAC TTGGAGTTT
59751 TGGAGTGGT TGCCTGGAG ATGGTAAGAC TTGGAGTGC AGGCTGGAG
59801 GAAATGCGG GTGCCAGGC CTAATGCTCT CTATCTACC CCACTTCCC
59851 CTGAGTCTT GTCCAAGAC AGCAAGCTTA TCCATAACC CATCTTAAAC
59901 CACACGCTC AGGTGATGG GAGGAGGCA GGTGCTGCT CTTACATCCG
59951 CCTCACCCG TACATGAGG GCGAGGGTGG GCTTGCACC AGCCAGTACG
60001 AAGAGACCG GGTCTGGCAG CTTGGGATG GCAAGTGGCT CAATGTCCAC
60051 TATCAGTCT CAGGGGCTCC TGGGCAACG CTGAGTGGG CTCAGCCACA
60101 GTTGCACCTG GTTACGGGG GAGAGGGGCT GGAAGGGCT GGGATAGGTG
60151 GGGTCAGAG AAGAAGAGAA GGCTGGGAG TGGTCTGGG AGAGGAGGTG
60201 TGGGCGCTC CAGAGGACT GCAAAGCTG GCAAGATGT TGCATTAATG
60251 TATGCTTGG AATCAGACAG ACTAGGGTCT GGTCTGGTGA CTCCAAATG
60301 GATGACCTCA GACAGGTAC TTTCCCTCC TAAACTGTT CATTAGCTGT
60351 CAAGAAAGG CAGAGAGTG TGGTACCTC ATTTAATCAT TGTGAGGATT
60401 AAGTAAGATA CTATAAGTAA AGCACTTAGT TAGTCTTAG CAATGGGAG
60451 GCAGTTTGT ATTTAAGCAT TAGCTTACC CACTTTCCC ACCTTCTCAG
60501 GCGACCTGG CCATGTGTT AGGTGCTAA AGTGGCTGA ACTCATCTG
60551 GTGCTCATG TCTCTGTTC TGTACCACA TTCTGTCTG TTTGACAGGG
60601 GCTTTAGGAG ATTCCAGCG GAGGTCCAAC CTTGCGAGC AGTGGCTCTG
60651 GAGGGCTGA GTACAGGCG CAGTCCGTT TGTTTGAGT TTAATAAAT
60701 TCAATTACAA AAGCGGAGC AGCCAATGCA CCGCCCTGCA TGCAGCCCTC
60751 CCGCCCGCC TTTGTGTCT TCTCTGCTGT ACCGAGGTT TTTTACATT
60801 TAAGAAAAA AAAAAAGAA AAAAGATTGT TAAAAAAA AAGGAATCA
60851 TACCATGAT CGTTTAAAA CCACGACAG CCGTTGGGT GCGAAGAAGG
60901 CAGGATATG TATGAGTCC ATCTGGCAT GAGCAGTGG TCAACCCCG
60951 GCTTGAAGA GGTGAGCTG GCTCTCTG TCCCATGGA CTTAGGGGGA

FIGURE 3T

61001 CCAGGCAAGA ACTCTGACAG AGCTTTGGGG GCGTGATGT GATTGCAGCT
61051 CCTGAGGTTG CCTGCTTACC CCAGGCTTAG GAATGAACIT CTTTGGAACT
61101 TGCATAGGCG CCTAGAATGG GCGTATGAG AACATGGTGA CCATCAGACC
61151 TACTTTGGAG AGAAGCGAGA GCTCCAGCC TGCTGTGGAG GCAGCTGAGA
61201 AGTGGTGGCC TCAGGACTGA GAGCCCGGAC GTTGTCTTAC TGTCTGTGTT
61251 AGTGTAGAAG GGAAGAGAAT TGGTGTGCA GAAGTGTACC CGCATGAAG
61301 CCGATGAGAA ACCTGGTGT AGTCTGACAT GCACCTACTC ATCCATTCT
61351 ATAGGATGCA CAATGCATGT GGGCCCTAAT ATTGAGGCTT TATCCCTGCA
61401 GCTAGGAGGG GAGGGGGTTG TTGCTGCTTT GCTTGTGTTT TCTTCTAAC
61451 CTGGCAAGGA GAGAGCCAGG CCTGGTTCAG GCGTCCCGTG CCGCTTTTGG
61501 CGGTCTGTTT TCTGTGCTGA TCTGGACCAT CTTTGTCTTG CCTTTTCAGG
61551 GTAGTGGTCC CCATGCTGAC CCTCATCTGG GCGTGGGCC TCTGCCAAGT
61601 GCGCTGTGGG GATGGGAGGA GTGAGGCACT GCGAGAGAG GTGGTGGTGG
61651 TTTCTATGCA TTCAGGCTGC CTTTGGGGCT GCGTCCCTTC TTATCTTCC
61701 TTGCTGCACG TCCATCTCTT TTCTGTCTT TGAGATTGAC CTGACTGCTC
61751 TGGCAAGAG AAGAGGTGTC CTACAGAGG CCTCTTACT GACCACTGA
61801 AGTATAGACT TACTGCTGGA CAATCTGCAT GCGCATCAC CCTCCCGCA
61851 TGTAACCAA AAGAGGTGTC CAGAGCCAAG GCTTCTACCT TCATTGTCC
61901 TCTCTGTGCT CAAGGAGTTC CATTCAGGA GGAAGAGATC TATACCCATA
61951 GCATATAGCA AAGAAGATAA TGGAGGAGCA ATTGGTCAAG GCGTTGGTIT
62001 CCTCAAAAC AAGGCTGCG ATTTATCTGC ACAAACATCT CCACITTTGG
62051 GGGAAAGGTG GTAGATTCC AGTTCCTGG ACTACCTTCA GAGGSCAGA
62101 GAGCTGGGAG AAGAGGCAAA GCTACAGGT TACTTGGGAG CCAGCTGAGA
62151 AGAGAGCAGA CTCACAGGTG CTGGTGTGTT GATTTAGCCA GCGTCTCCG
62201 AGCACTCAT GCATGTGCCA GCGCTGGGC CCTAGCCCTT TCGTCCCTG
62251 CAGTCTGAG TGCCAGCAG CAATCCCTT CACCACAGG TTTGTGTTG
62301 CTGGCTTGAA GACAAATGGT CTTAGAATTC ATTGAGACC ATAGCTTCAT
62351 ATGGCTGCTC CAGCCCACT TCTTAGCATT CTACTCTCT TCTGGGGCT
62401 AATGTGAGCA TCTATAGACA ATAGACTATT AAAAAATCAC CTTTAAACA
62451 AGAAACGGA GGCATTGTAT GCAGATTTT TGCAAGCAA CATAGAAATA
62501 ATTTAAAAAT AGTGTGTGTT CTGAATGTG GTAGACCCIT CATAGCTTTG
62551 TTACAATGAA ACCITGAAT GAAATATTT AATAAAATAA CCTTTAAACA
62601 GTCCATTGTG TTACTGCTGT TGGAGGTTA CCGCCAGAG GGTAGATTTT
62651 AGCAGCCTGG GTTACCAGGT TGGAGAGAGT ACGTCTCTT ACTCCCTTG
62701 GGTACTTTTG AGAATAAAAC TTCTCATGC CTGTAATCC AGTACTTTGG
62751 GAGGCCAGG CCGGCGAATC ACGAGGTGAG GAGTTGAGA CCAGCCTGGC
62801 TAAT (SEQ ID NO:3)

FEATURES:

Exon: 1690-1694
Intron: 1695-2000
Exon: 2001-2095
Intron: 2096-14208
Exon: 14209-14268
Intron: 14269-21854
Exon: 21855-21909
Intron: 21910-22781
Exon: 22782-22847
Intron: 22848-25768
Exon: 25769-25841
Intron: 25842-25986
Exon: 25987-26089
Intron: 26090-26492
Exon: 26493-26576
Intron: 26577-27019
Exon: 27020-27114
Intron: 27115-27753
Exon: 27754-27876
Intron: 27877-32559

FIGURE 3U

Title: ISOLATED HUMAN KINASE...

Intron: 58082-59856

Chromosome 10

ALLELIC VARIANTS (SNPs):

DNA

56633	G	A	Intron
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Context:

DNA

Position

GAGCGCGGCACGCCAACCACATCTGTTTCAAGTGTCTTGCGGTGGCGCGGTCTTTTGCTC

FIGURE 3V

ATGTTGGATGGTGGTGGTACAGGCGCGGTGGTGGTGCATGTACGTGAGTGTGACTAGAG

8632 GA0GCGCGGCTCTGCTGCTTGGGAGAGATGAAGGCACTCAGGAGGCGAGCAAGTGA
GCGCGCTTCCATGGAGGCTGAAATCAGTGGGTTCAGGAAGTTCTCACAATCCATGTT
TAGGGTCATAGGCACAGACCTGCAAAATACCTTTGCAAGTTAAGANTGTCTTTAGAT
TGGAACTTGGGAGAGTCTCAGTACAGTGGGAATGTGCATCCTTTCCACGTACAGAGG
ATTGTATGTTTACGTGGCAGCAGGATCTTATTGAAGCTAGTGGCTTGGCATTGTGTTTTT
[T, -]
TTTTAGGAAATGTCACTAAGTCAAGCAGGCGCATCCCTGAGAGGCGCATGGAGAATCTG
TGGCCAGGCGCTTCCCTGGCGCGCTGACCTGGCAGAGGAAGGAAGGCGCATTGGAGTAGGCT
TCTGTCTTACGGCCAGGCGGAGGTGGTTCAGGCGCAGGCTTGGTGCACCGCTTGGCTG
CAAGCTATCACCTTCCCTATCTGCTTCTCTTTCTGCTTCCCTGGTGCATCTGGTCACT
TCTGTGCGCGCTTCCCTGTGAATCGTGGCAGCTTGGACCAAGTCTGAAGCACTTGGCGA

19366 CTCAGGAGGCTGAGACAGGAGATGGCTCAAGACAGGATCTCCAGCGCGCTGGGCAAC
ATAGTGAAGCCCTGTCTCTTAAAAAAGAAATATGAATCTGCTGTCTAAATAG
GCCTTGAATAGGACAGTCAATTTCTCTCTGTCTTCAAGTGTCTGTAAATTTCTTTAC
AAATTAAGAAATGTCTAGTACAGTCTTATTCAGATACAGCTTCTCCATCCCTCTTGT
CTTGGCAGGTGCGCTTGTCTTGGGCAACATCAAGCTGTCTCTCTCTGGGTGGCGTA
[G, A]
AAGGATTAGTCTTCTTGTCTGCTCTTCTCTTAATTCCTTCCCGCTTCTTCCAC
CTGGGCTCTGTGTGTGGCTTCCCTGGGAGAGGCGAGAGCGCAATCACTTCTGTCTAGG
AGAGGCTTGGGTGCGTCTCTTCTGCGCTGTCTTGGCTTGTGTGTGGCGGGGCG
AGGGTGTGTGGGCGATGGGTGTGTGGGCGATGGGTGGGTCTGGCTGAGGCGAGG
CTCAGTCCAGGCGCGAGGAGCTGAGTGGCTCCACTTCTCTGAGATGGTGTGAGCAT

23770 CCCCCCTGCGCTTTTCTTCTTCTTGAACAATTCGGTGTCTCAAGCCACTGTGCTGAG
GCTCTGGCATGATCCAGAGGTGAGAGACATGGTTTCTGTCTCTGAGGAGTGGAGAT
CTGGGCTGATAATCCAACTAGAGCGCGGGAGCTTTCAGGCTCTGTACCTTGTCTCT
AGACCACTAGACAGGCTTGGCTGGGCTCTCTCAACTTGAAGCGCTTCCCGGCGA
CATGCGCTAGGCTCTGCGCTTCCCTGGGATCCCTGGTGGCTCCCTCAACCGCTCTAGG
[T, C]
GCGTGTCTAGGCTGCTTTCCCGCTTGGCTCTTCCCGCGCTTGTCTTCTGAGGCT
GATGCTCTACAACTGGTTTGTATCTCTGCGCTGAGCTTATCTGGCTTATGTGGCAG
CTCTGGCTGCTTCTGGAGAGTGGGGAGTGCAGCTTCTTCAAGATTTCTCAACTTGA
AGGCGAATGTTTGTCTGATCAACTTCAATGCTTCAAGCTTGGGAGAAATTTCTCAAGTGG
GAGATGAATTCAGTGGCAGAGGAGGAGCTAGGCTCTGGGAGGAGGAGGAGGAGTGA

31013 TCAGGAGGCGTGGCTCACACCTGTAGTCCAGCACTTTGGGAGACAGGGTAGGTAGATC
ACTTGAAGCGCGAGGTTTGAAGACAGGCTGGGCAACATGGCAAAACCGCATCTCTACAA
AAAAAAACTTTAAATATAGCTGGTGTGTGTAAGCTGGCTTGAATCTTGGGAGGCTGA
GATGAGAGGATCACTTGAAGCTAGAGAGGTGGAGTTGCAGTAAGCATTTATTTGTCTAC
TGCACTCCAGGCTGGGCAACAGAGTGAATGCTGTTTCAAAAAAATTTTCTT
[A, T, G]
TTTAAGGAGAGGCTTAACTATAATCTATAGAGAAGATCTAGTCCAGAGGAAGAGTTGA
AGATCTCTGTCTAATTTAGGAAGCAAGGTTTGGCAGCAGAAAGAGAGGCGGCTCTG
AGCGAAGGCGAGGGGTCATCCCGGGATGACCATGATCCCGCTGAGACTTCTATTAGT
GTGGAGGCGAGTGAAGATCGGCTTGTGAGTGAAGTCTGAGCTGAAGGGGTTCTTGTCTG
ATCACCTCTCATTTTGTCTTTTGGAGAATTTACACCGAGGAGGAGTAAATGAGAGCT

33206 CCATGCTGTCTCCAGCACTTCTCAGGTAATGTTTCCAGCTGTGTACTTTGATTTATGC
CGAGGTGAGTGGATCAGGAATGGGCTGTGTGCAATCCCGGCAACCGCTGGGTTTCTTGGC
GTCTTGGGCGACACCTTGAACAGGCGAGTGGATCCCTGTTTGAAGGGCTGCTGCTGC
TGCTGAGTCTCTCTCTGAGATTCAGGGGCTGGACTCACATTTGTGAATTTCTCTAG
AACTTCCAGGAGTAGGCTGCGCACTTGTCTATGTAATTTGTCTCTGATTTCTTATT
[T, A]
AACTCTCTGAAGACTCTCAGCACTTTACAGATTTTAGCCATTTAGGATCTTGGAGGATG
TGCTGGGCGAGAAAGAGAGATGAGGTACAGTGAAGTCTCTCAATTTGCCAATTTGCCAC
CATTCATTTGCTGCTGGGAGATCTCTTACTTCAATTTGTCTCAAGTGGAGATGACTAAT
AGAAATTTATCCAGATGTTTAAACCTTTTGTGGGAGCTTGTCTTAAATAGTCCCTGAG
ATCTAGCTTATAAGAGTGAAGAAATAAGACAGCAGGAGAGAGGGAAGGAGCTTGTCT

FIGURE 3W

33263 TGCCGAGGTGAGTGGATCAGGAATGGGCTGTTGCCATCCCGGGCAACCGCTGGGTTTCTC
GGCGTCTGGGCGCACACCTTGACCGGGCGAGTGGATCCCTGTTTGGGGGCTGCTGC
TGCTGCTGAGTCCCTGCTCTGAGATTCAGGGGCTGGACTCACATTTGTGATTTGTTCC
TAGAATCTCCCAAGGAGTAGCTGCGCAACTTGCTATGTACCTTGTTCCTGGAATCTT
ATTTAATCTCTCAGAGCTCTCAGACCTTTACAGATTTTAGCCATCTAGGATCTTGGAG
[G, A]
ATGTGCTGGGGGAAGAAAAGAGAGATGAGGTACAGTGAAGTCTTCTCAATTGCCAAATGTC
CAACATTCATTTGCTGCTGGGACGATCTCTTACTTCATTTTGTCCAAGTGGAGATGACT
AATAGAAATTTATCCAGATGTTTAAACCTTTTGTGGCGACTTGTGCTTAAATAGTCCCT
GAGATACTAGCTATAACAGTGAAGAAATAAGACAGCAGGAGAGAGGGAAAGGAATGTG
CTTAATTTGCATAAAGAAATGGGAGAGGTGGGAACAATAATTTGTAAATCATACTGAC

33859 TTGACATTTATTTTAAAGATGCAAGACCTCCACTCCCCCTCTTGGCCCCACCCCTACCCCC
AACCCCTATTTATTTGCTTCAATTTGGGAAGCACAGTGGCTTTTGTGAGGAAAAGA
TTAATGTGAGACTGAAGACAGAGAGGGCTCTGCCCCAGCTTGCCATCTCCCCGGTCTC
CTTCCCTCTAACCCCTTGCTCAGTGTTTGGTTCAAGACCCCCCTTCTCTTCCATA
ATAAGACTTCCCTTCTTCTTCTGCAACCATGGAAGGGGGTGTGTGGGAGC
[C, A]
TAAGCCACCTTCAGTGGGAGCCACTTCTGAATAACCGTCTGCTGGGCTGGCTGGGCT
GGCTCCAGGTAAAGCCAGGGCTTGGCTGTGAGGATGCTGCAAGCAGGGAGCCTAGGGCT
TGTGTTGTGAGCTCAGAGCCATGGAGCTCCCGAAGGCCAGGGCTGGATAGTGAACCCGG
GGCTGGGGTGGCTGGCTAGGGCTTCTCTTTGACCCCTGGTTTGGGGCTGTATCTGT
GTATGGGTACCCACGAGGGCATACTGTGGTGTGGCTCCACCTCTCCAGATGGGAACA

37254 CATTATTCGCGAGTCTTCTGCTCAGAGTCCAGAGTGGACACTGGGGAAAGGGT
GGCAGCTAGGACCCAGTGAACCTGGTGGAGACCTGCTCAGTGAAGGCTTCAACCCCTGG
CAAAACCCCTCTGTAGGGTGGTCTGGTTTCTGTGTCTGTGTCTGTGTCTGTGTCTGTGTCT
CTGTGTGAACCTGTGACACTCTGCTTCTTGAGAACACTCAGGAGATGTCTTGCACTCTGTC
AGTTTGGCCATCCAGAGACTTCCATGGCACCTAGGGATGGAGCCCTCACTCTTCAACC
[T, C]
GGCCTCTGCTTCCAGGCTGGGTGGAGCTGTCAAAGGCAGAGTCCCGAGTGGCCAGG
CGCTCCAGTACTGAGCATGGTTTCTCTCTAAGTGTGTGCTATCCATGCCCCCTCTCCAC
GCAGAGGAGATCTCTGAGGTGCCACCCCTGAGGGCTCTGACGCCACTCAAGATCCCTTCTT
GCTGAGAGGCTATAGGAGTGGCTCTTTTGGGGGTTTGGGGAGCCCTTGGCCCCCTGT
CAGACACAGCACTCTCTTGTGATCTGGCTGCCGACTTCAGGTGGGGAGAGGGTACAA

40809 GTCCGCAAGGAAACAGAGGAAGGACAGAGGTTAGGGGCAAAAGAGAAATGTGCAGCAG
CTGCAGCTCTTCCAGGAACCTGAGGATGAGGGCTGGGCAGACATCATTAGGTAAAGG
CTTTAAATGAGGACGTGGGTGGGGAACCTAGCCCTGCAATGTGTGTGTGTGTGTGTGTGT
ATATGTGCTCAGTAAATGAGTTTATGCCACATCTCTTTGAGAAAAGAGCTTCAATATCA
TGGTGGGAACAGAGGCCAATGATCACCCAAATTAAGGCAACCCGGTATTCGAGC
[C, A]
GTGTGATGGGAGGGGTAAATATTTTATTTGAAAGAGTTTCTGTGACAAATAATCCCTCT
TAAACCCAGTGAAGCTGGGGTGGTGGCTCACGCCCTGTAATCCAGCACTTTGGGAGG
CCGAGGCGGGTGGATCAGGAGGTGAGGATCGAGACCATCTGGCTAACCGGTGAAC
CCCATCTCTACTGAAAATACAAAAAATTAGCCGGTGTGGTGGCAGGCGCTGTAGTCC
AGCTACTTTGGGAGGTTGAGGCAGGAGAAATGGCGTGAACCCGGGAGGCGGAGCTTGCAGTG

41025 TTGTGAGAAAAGAGCTTCAATATCATGGTGGGAACAGAGGCCAATGATCACCCAAATTA
AAAGGCCAACCGGTATTTGCGAGCGTTGTGATGGGAGGGTTAATATTTTATTTGAAAG
AGTTTCTGTGACAAATAATCCCTCTTAAACCCAGTGAAGCTGGGGTGGTGGCTCACG
CCCTGTAATCCAGCACTTTGGGAGGCGAGGCGGGTGGATCAGAGGTGAGGATCGAG
ACCATCTGGCTAACACGGTGAACCCCATCTCTACTGAAAATACAAAAAATTAGCCGGG
[T, C]
GTGGTGGCAGGCGGCTGTAGTCCAGCTACTTGGGAGGTTGAGGCAGGAGAAATGGCGTGA
AACCAGGAGGCGGCTTGCAGTGAAGCTGAGATTTGTGCACTGCACTCCATCTGGGTGA
CAGACCAAGACTTCCGTCTCAAAAAAATAAAAAAATAAAAAAATAAAAAAATAAAAAAATA
TAGGTGTGGTGGCTCACATCTGTAATCCAGCACTTTGGGATGCTGAGGTGGGCTGATCA
CTTGAGGCCAGGAGTTGAGACAGCCCTGGCCAAATGGTGAACCCCTCTCTACTTAAA

FIGURE 3X

42232 GGAAACGTAGTGAGACCCCATCTCTTAAAAAATAAATTTAGCTGAGTGTGGTGG
AACGTGCTGTAGTCCAGCTACTTGGGAGGCTGAGGTGGGAGGATGCTTGAGCCAGG
AGGCTGAGGTACAGCCAGGATCACCACTGGCTCCAGCTGGGTGACAGAGTGAGGC
TCTGCTTAAAAAATAAATAAAGAGAGAGAGAAAAAAGATTGGAGACAATTGAAA
AGCCAGTAAGGAGCCAGACACAGTGGTGGCTACCTATAGTCCAGCTACTCAGGAGGCTG
[T,C]
CGCAGGACAGAAATGCTTGAGCCAGGAATTCAGGCCAGCTGGGCAACATAGTGAGACC
CCCAACTCTTAAAAATGTTTTTAAATTTAAAAATAAAAGATTTTTTAAAGCCAGTAAA
TGACTAAATAATTATGGAAATCTACTTAATAACTATTCAAAAGTTATTAATTTTCATG
ACCGTAGGGATATTTTAAAGTGAATAAATAAGTGAGAAATGTTTTATATTAAAGTGAAGGA
AGTGGTATATAAAGGAGTACAGACAAGCCAGGCAAGGTGGCTCAGGCTGTATATCCAGC

50477 TTGGGACCTGAACATCAGTCTCTTGAGGCCCCCTTGTAACCTGCTCAGCTCTCCTT
TGCAAGGCCAGAAACAGGAAGAGGGCTGGGGTCCCCACCTCTGGATGGTGTGAGGTCT
CCAGGCTCCCTGAGTGGCTCATGCTGGCTAAGTCTCTCTGGGCTCCCTCAGGGGTCTG
TGCTCTCTTGAGGTCCCTCTGCTAGTGGTGGCTAACTAGAGAGTACAGAGGGGGTGC
TGGGAAAGAGGGAGAGGTGATGTTGGCTGCTACTCCCTCCTTGCGGACCTCATACAC
[G,A]
TGAGGTGGCGGGTGGGGCCAGGAAGTGGGAGGCAAGGCGGGCGAGTGGGAGCT
CTCTGGGCTCAGCTTGCTGAGGGGGCTCCTGTCTGGCTCTCTCTGGGAGCTCATTC
TCTGGCCATGTTCTGCTCACAATTCCTGCTGAGAGCTGTTGGGCGGGGGGGGGGG
CTGTGGCTCAGTCCCAAGCTCCCTCTAGTGTACCTGCCCCGTGGGAAACCCATGTGGAA
AGAGCCCTCAGAACTGACAGGAATCAGGACAGAGGCCCCCTGCTGTGAGCTCTCTGGGA

55352 TAGTAGCTCCAGGCCCCCTGTGAGTGGGTGAGTCTAGTCTTGTATTCGGCACCTGCTGGCA
ACATAGGAGGGCTGTGCTGCTGGGCTCTGGAACCTGTGGGCTGGCCCCCTGGAACTC
TTCCCCGGATCAGGGTCTCTGGACAGGCTGTGTAAGGCTGTCTGGAAGCCACAGCC
CAGGTCTGGGCACTTGGCTGGTGGCTCAGCTGGGAGGCTCTCTGGCAGAGGGGGGGG
GTGGGATGTGCTCAGTGTCCACAGAGCTGAGGCGAGGGGTCCCCCTTGGCCCCCTCT
[A,G]
CAGGCCCCATGGGCTGGGGCCCTGTCTGGCTTGCTGGCTCAGCTGGCTGTCTGTGTGT
TTGGCTGCTCTGCTTGGCTGGCTGGCTGGCTGGCTGGCTGGCTGGCTGGCTGGCTGGCT
GTGGGAATGGCAGCTGGTGGCTGAGGAGGAGCTCCGGGACAGAACAGCCCCCTCT
CAGGCTGAGGCACTTGGCTGGCTGGCTGGCTGGCTGGCTGGCTGGCTGGCTGGCTGGCT
TTCTGGCTTGGCTTGGCTGGCTGGCTGGCTGGCTGGCTGGCTGGCTGGCTGGCTGGCT

55914 CTGCTCTGAAGCCCCCTCAGGGAACCCACACAGCTGTGAGTCCCAACCACTGCCCCGT
GGTAGTAAGCTCTGGGAGCATGGCTCTGCTGGGGGTGGGGGTGAGCTGGAGGTGCTGT
TGAGACAGGCAAGGCCCCCTGAGTCTGGGGCCCAAGAAATATGAGAGTGTGGGTGGA
AAAACATCTGGATGGGATGAGGGAGTGAAGAGCCCCAGGATGTGAGTGGGCTTGGCT
CAGGCTGAGCCAGGAAGAGGCGAGTGGGAAGTCAAGTCTGTGGGGGTGGGAGTGGG
[A,G]
TGATGGGGAATCTGTACAGCGAGGAACGTGTGTGGGGATGTAGTCTTCTGAGTCTCA
GCATAACAGTATTAAAGAGCATGGGTGAGGCGAAGATAGATCTGAGTTTAAATCCAGC
TACACTGCTTCAAGAGTGTGAGTTTAACTCCAGAGCTGCAAGTTCTTATCTGTAA
TGTGGAAATAAATGGCAGCACCTCAGAGCTTGTATGATAAAGACAAGGCAGTAGGA
AGTCTTGATAGGCTGGCTGGATGGGTATCAGTAGCTCATCTCATATTTCTAGTTACGT

56633 TGGGGTTGGAGAGGGGTGTGTGTGTGTGGGTGACACCTGGCTGCTGCTTTTGAAGCCG
ATCGAATCTCTGCTTAACTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT
GCTGAGGCTGTGGGGCCCCCTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT
GTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT
TGTCTGTGAGCTTTTGTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT
[G,A]
GGTTAGGATGAGCCCAAGCTCAACCAAGCTCTTCCCTTACCTTGGTGGCAGCCCCCTGCTG
GTATGGGCTTCTCTATAAGAGAGCCCATGCCCCAGGACATCACCAGCTGTCCCTTGG
CTTGTGATGGGTGTGGGAGGAGGCTCTGGAGGGCAACCTCTGCTGCTGCTGCTGCTGCT
CAGGCTGCTGCTGCTTCTGCTGAGGAACAGCTCTGCTGCTGCTGCTGCTGCTGCTGCTGCT
CAGCTTTCCCAAGCTCTGAGAGGTAAATGAGCAGGCTCTCTGGTACAGGCTGTCCCAAG

FIGURE 3Y